

EPA Region 5 Records Ctr.



325283

INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT
SITE INSPECTION REPORT

FOR

LOGANSPORT WELLFIELD
LOGANSPORT, CASS COUNTY

U.S. EPA ID#: INN000510272



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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January 27, 2009

Mr. Erica Islas, SR-6J
U.S. EPA Region V
77 West Jackson Boulevard
Chicago, IL 60604-3507

Dear Ms. Islas:

Re: Logansport Wellfield
Logansport, Cass County
Site Inspection
INN000510272

SITE SUMMARY

The Indiana Department of Environmental Management (IDEM) under a cooperative agreement with the U.S. EPA conducted a Site Inspection (SI) of the Logansport Wellfield site to determine a source of contamination under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, a.k.a. Superfund).

The Logansport Wellfield supplies water for approximately 4,590 residents of the municipality of Logansport (an additional 6,105 residents are served by an upstream surface water intake). Logansport has five (5) wells located close together on the western edge of the town, adjacent to the Wabash River.

The IDEM Office of Water Quality's Drinking Water Branch notified the Site Investigation Program of levels of tetrachloroethylene (PCE) detected in Logansport's finished water. Beginning in February 2002, Logansport has reported to IDEM tetrachloroethylene in their finished water at levels between 0.99 ppb and 3.1 ppb (the MCL is 5.0 ppb). No other contaminants have been detected in the water samples. The IDEM Site Investigation Program conducted the SI in August 2008. A GeoProbe® was utilized to obtain subsurface soil and ground water samples in addition to water samples obtained from the municipal wells and residential and business wells. PCE was confirmed in the municipal wells by the IDEM investigation at levels below the MCL, but was not detected in any other sample.

Ms. Islas
Page 2

Should you have any questions regarding the contents of this correspondence, please contact me at 317/234-3505.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan Chesterson", with a long, sweeping horizontal stroke extending to the right.

Dan Chesterson
Site Investigation Program
Office of Land Quality

DPC/sb

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

SITE INSPECTION REPORT

FOR

CITY OF LOGANSPOUT WELLFIELD


LOGANSPOUT, INDIANA


CASS COUNTY

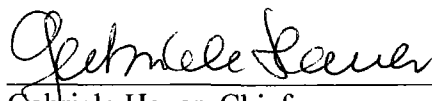
U.S. EPA ID: INN000510272

JANUARY 21, 2008

Signature Page
For
City of Logansport Wellfield
Site Inspection Report
Logansport, Indiana
Cass County
U.S. EPA ID: INN000510272

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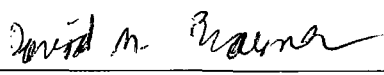
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SECTION 1.0 INTRODUCTION

The Site Investigation Section of the Indiana Department of Environmental Management, (IDEM) under a Cooperative Agreement (CA) with the United States Environmental Protection Agency (U.S. EPA), Region V, has been funded to perform site inspections at certain sites listed in the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS). This work is conducted under the authority of the Federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (Superfund), and the Superfund Amendments and Reauthorization Act (SARA) of 1986. Typically, a Preliminary Assessment is completed, and if the site is not given a “No Further Remedial Action Planned” (NFRAP) status, it will go on to a sampling inspection called a Site Inspection (SI).

The primary objectives of the SI work are:

- To collect data that will be used in the Hazard Ranking System (HRS) to determine whether the site is eligible for placement on the National Priorities List (NPL);
- To identify sites that may require removal actions to address immediate threats to human health and/or the environment.

The Site Investigation Section was given approval by the U.S. EPA to conduct an SI at the City of Logansport Wellfield site, located on Cliff Road (a.k.a. W. South River Road) just west of U.S. 35, Logansport, Cass County, Indiana on August 11, 2008.

Information contained within this report will be used to evaluate this site to support a site decision regarding the need for further Superfund action, including the possibility for the City of Logansport Wellfield site to be considered for inclusion on the National Priorities List (NPL) of hazardous waste sites.

SECTION 2.0 SITE BACKGROUND

2.1 Introduction

This section presents information obtained from the IDEM files, the internet, discussions with the City of Logansport officials, and site reconnaissance visits.

2.2 Site Description and Location

The City of Logansport is located in south central Cass County. The site is located in the southwest part of town, just south of the Wabash River, north of State Road 25, and west of U.S. 24 and U.S. 35. The Town of Logansport operates five (5) municipal wells, at depths between 69 and 88 feet, located in a straight line from east to west along Cliff Drive, approximately 250 - 300 feet from the Wabash River. The latitude and longitude for the site are 40° 44'44.02"N and 86°24'9.00"W (generated utilizing ARC GIS Version 9.2 and aerial photography flown 2005 for the Indiana Department of Homeland Security). The wells are located on property belonging to the Logansport State Hospital (State of Indiana) and leased to the City of Logansport. Wells #2 and 3 are located directly north of the Logansport State Hospital. Wells # 4, 5 and 6 are located just to the west of #2 and 3 and are northwest of the hospital. To the south and west of Wells # 4, 5 and 6 are agricultural fields. To the west of the agricultural fields is a quarry. To the south of the agricultural fields there is a compost facility and just south of the compost facility is an alleged former dump that was utilized by the hospital. Currently the former dump area is overgrown with vegetation and is still used as a disposal site for various inert materials.

2.3 Site History

The City of Logansport currently provides water to its residents from five (5) ground water wells and one (1) surface water intake from the Eel River (the Eel River flows into the Wabash River approximately 1.4 miles upstream of the site; the surface water intake is approximately 2.5 miles upstream of the site). The ground water and surface water systems are operated independently of each other and serve different areas of the city. Approximately 4,590 residents are served by the ground water wells including those living south of the Wabash River, on Biddle Island, and in the extreme western part of town north of the river. The remaining residents (approximately 6,105) are served by the surface water system. According to sample results submitted by the City of Logansport to IDEM, tetrachloroethylene (PCE) has been detected in the city's finished water (from the ground water production wells) since March 1994. The City sampled for contaminants annually from 1994 to 1999 and has sampled quarterly since 1999. The U.S. EPA Maximum Contaminant Level (MCL) for PCE is 5.0 parts per billion (ppb). Sample detections from the Logansport Wellfield have ranged from non-detect to 3.1 ppb. They have been detected every quarter except for three. There are no other contaminants of concern. According to Mr. James Jackson, Logansport's drinking water operator, all residents within the Logansport City limits utilize the municipal water system for drinking water, although over half receive their drinking water from the city's surface water intake on the Eel River. The closest known private drinking water well is located approximately 3/4 mile to the east of the site.

SECTION 3.0 PROCEDURES, FIELD OBSERVATIONS AND ANALYTICAL RESULTS

3.1 Introduction

This section outlines the procedures, observations, and analytical results of the City of Logansport Wellfield Site Investigation. IDEM's Geoprobe® was utilized to collect subsurface soil samples and several of the ground water samples. Indiana Underground Plant Protection Service (IUPPS) was contacted and called to the study area to identify any underground hazards prior to drilling. Additionally, maintenance staff from the Logansport State Hospital identified areas on their property where underground hazards were present.

3.2 Site Representative Interview

IDEM staff contacted the City of Logansport's drinking water operator, James Jackson, and a meeting was set up at the Logansport Municipal Water Office on February 19, 2008. Upon arrival, Mr. Jackson was apprised of IDEM's on-going investigation and our plans to conduct an SI in the Logansport community. Mr. Jackson gave IDEM staff an overview of current conditions of the Logansport well field. He also provided IDEM with sampling analysis of the individual wells that had been conducted by the city in late 2007 and early 2008 (see Appendix D). Mr. Jackson is a long-time resident of Logansport and was also able to share possible contaminant sources throughout the local area. These source areas were investigated during the SI.

3.3 Reconnaissance Inspection

On February 19, 2008, Mr. Dan Chesterson and Mr. Doug Fisher of the SI program visited the City of Logansport to conduct a preliminary site visit. Upon arrival, staff drove

around the community to become familiar with local features and to identify any possible contaminant sources. Staff also met with Mr. James Jackson, the City of Logansport's drinking water operator. The Logansport wells were located and pictures were taken of the well locations. On July 30, Mr. Dan Chesterson and Mr. Steve McIntire of the SI program returned to the City of Logansport to predetermine sample locations for the August sampling event.

3.4 Sampling Procedures and Analytical Results

During the week of August 11, 2008, samples were collected by IDEM staff at locations determined during the reconnaissance survey (Appendix B, Figure 3). The samples were analyzed for parameters contained in the Contract Laboratory Program (CLP). The CLP analytes and the analytical results for ground water and subsurface soil are provided in Appendix D.

SI staff collected twelve (12) subsurface soil samples, including one (1) duplicate sample, one (1) MS/MSD sample, and two (2) background samples. Additionally, 22 ground water samples were collected, including three (3) duplicate samples, one (1) MS/MSD sample, three (3) trip blanks, one (1) rinsate blank, one (1) equipment blank, and two (2) background samples. The ground water sample at locations Boring 1 and Boring 6 were abandoned due to refusal of the drilling equipment prior to reaching ground water.

Soil samples were collected from sample cores obtained by the Geoprobe® drill rig. The sample cores were screened with a MultiRae® photoionization meter to detect the presence of VOC's. The soil was then collected with three (3) EnCore® sampler kits according to CLP protocol. The Encore® samples were immediately placed on ice after

collection while awaiting shipment to laboratory. Nitrile gloves were worn and discarded between each sample location. The sample containers contained no preservatives.

Ground water samples were collected in three (3) 40-milliliter vials preserved with hydrochloric acid (HCL). Each well was purged approximately 15 minutes prior to obtaining the water sample. Nitrile gloves were worn and discarded between the collection of each sample. The sample containers were immediately placed on ice after collection while awaiting shipment to the laboratory.

Weather conditions throughout the sampling event were generally sunny with temperatures in the 80's. The samples were shipped by Federal Express to the assigned CLP laboratory (Liberty Analytical Corporation, Cary, North Carolina) throughout the week on a daily basis. The laboratory results were reviewed and evaluated for the quality criteria contained in the Indiana Quality Assurance Project Plan (QAPP). The results were determined to be acceptable for use.

3.4.1 Ground Water Samples

The purpose of ground water sampling was to establish the existence or absence of contaminants in the ground water possibly emanating from potential sources in the study area. Ground water grab samples were collected by IDEM's Geoprobe[®] at locations selected during the reconnaissance inspection and from municipal wells and private residential and business wells. A total of twenty-two (22) ground water samples were collected during the field event and analyzed for CLP VOC's. The samples are identified as GW-1 through GW-22.

Ground water samples (GW-1 through GW-5, including one duplicate) were obtained from the city's municipal wells (Well #'s 2, 3, 4, and 5; Well #6 was not sampled due to its being out of service at the time of sampling) to confirm the presence of contamination. Samples GW-6, GW-7 and GW-20 were background samples obtained from a private business well and two private residential wells, respectively. Samples GW-8, GW-14 and GW-16 were trip blanks obtained from a reverse osmosis water system used for quality assurance/quality control (QA/QC) purposes. Sample GW-9 was obtained from a boring between the Logansport State Hospital and the municipal wells to determine if the hospital was a potential source of the contamination. Sample GW-10 was obtained from a boring along W. County Road 200 S. south of the Logansport State Hospital and north of Hanson Logistics (Tyson Foods) Cold Storage to determine if Hanson was a potential source of the contamination. Sample GW-11 was obtained from a boring on the Logansport State Hospital just between the former LSH laundering facility and the municipal wells to determine if the hospital was a potential source of the contamination. Sample GW-12 was obtained from a boring along W. County Road 200 S. just north of the Indiana State Highway Garage to determine if the garage was a potential source of the contamination. Sample GW-13 was a duplicate of GW-12. Sample GW-15 was obtained from a boring on the northwest corner of the Tinnerman-Palnut property to determine if this facility was a potential source of the contamination. Samples GW-17 and GW-19 were obtained from a boring along S. County Road 125 W., north of the Gangloff Trucking facility to determine if this facility was a potential source of the contamination. Sample GW-18 was a duplicate of GW-17. Sample GW-21 was a rinsate blank sample and sample GW-22 was an equipment blank sample taken for QA/QC purposes.

Tetrachloroethylene was detected in each of the municipal wells at levels below the MCL. The Sample Location and Comment Tables in Appendix A list the sample number, location, and any comments pertaining to each sample including QA/QC information. Refer to the Sample Location Map (Appendix B, Figure 3) and Table 2 in Appendix A for the location of each sample. A Key Findings List summarizing contaminant concentrations detected three (3) times above background is included in Appendix A. Refer to Appendix D for a complete list of the chemical analyses provided by the CLP laboratory.

3.4.2 Subsurface Soil Samples

Subsurface soil samples were collected to establish the existence or absence of contaminants in the subsurface soil emanating from potential sources in the study area. A total of twelve (12) subsurface soil samples were collected using IDEM's Geoprobe® at locations selected during the reconnaissance inspection during the SI. The samples are identified as S-1 through S-11 and S-14. All samples were analyzed for CLP VOC's.

Subsurface soil sample SS-1 was obtained from a boring on Logansport State Hospital property between a former landfill/current composting facility and the municipal wells to determine if the landfill was a potential source of the contamination. Sample SS-2 was obtained from a boring on LSH property between the hospital and the municipal wells to determine if the hospital was a potential source of the contamination. Samples SS-3 and SS-4 were obtained from a boring on the Logansport State Hospital just between the former LSH laundering facility and the municipal wells to determine if the hospital was a potential source of the contamination. Sample SS-5 was obtained from a boring along W. County Road 200 S. south of the Logansport State Hospital and north of Hanson Logistics (Tyson Foods) Cold

Storage to determine if Hanson was a potential source of the contamination. Sample SS-6 was obtained from a boring on the northwest corner of ABC Metals to determine if that facility was a potential source of the contamination. Sample SS-7 was obtained from a boring on the northwest corner of the Tinnerman-Palnut property to determine if this facility was a potential source of the contamination. Sample SS-8 was obtained from a boring along S. County Road 125 W., north of the Gangloff Trucking facility to determine if this facility was a potential source of the contamination. Sample SS-9 was a duplicate of SS-8. Samples SS-10 and SS-11 were background samples obtained from borings along County Road 300 S. and County Road 175 W., respectively. Sample SS-14 was obtained from a boring along W. County Road 200 S. just north of the Indiana State Highway Garage to determine if the garage was a potential source of the contamination.

The Sample Location and Comments Tables list the sample number, location, and any comments pertaining to each sample. Refer to the Sample Location Map (Appendix B, Figure 3) and Table 2 in Appendix A for the location of each sample. A Key Findings List summarizing contaminant concentrations detected three (3) times above background is included in Appendix A.

SECTION 4.0 DISCUSSION OF MIGRATION PATHWAYS

4.1 Introduction

This section presents a discussion of potential pathways for contaminants migrating from the potential sources near the City of Logansport Wellfield Site. Potential contaminant migration via ground water, surface water (including Drinking Water Threat, Human Food Chain Threat, and Environmental Threat), air, and soil exposure are discussed.

4.2 Ground Water Pathway

The Ground Water Pathway is the focus of this SI. According to the Hydrogeologic Atlas of Aquifers in Indiana, the Logansport Wellfield is located in the Upper Wabash River basin. The Wabash River flows east to west in the vicinity of this Wellhead Protection Area (WHPA) and is the main surface drainage channel for this basin. The wellfield lies less than a mile downstream of where the Eel River joins the Wabash River. The aquifer systems in the vicinity of the site consist of Wisconsinian aged surface and/or buried sand and gravel aquifers and Silurian aged carbonate bedrock aquifers. The Logansport municipal wells which contained completion data were completed at 71 to 85 feet below grade with 20 feet of screen set in a coarse sand and gravel unit. Static water level in these wells ranged from 16 to 19 feet below grade. The level of water in three piezometers was determined to provide probable direction (northeasterly) of the ground water flow in the vicinity of sampling on and about August 13, 2008. The piezometers were installed with a Geoprobe® direct push machine. A survey from an elevation of a nearby reference monument, adjusted to the NAVD '88 datum, was used to determine the elevation of the top of the (well) casings. The distance down from the top of the casings to the water surface was measured with an electric tape. The distance was subtracted to determine the water surface of PZ001, PZ002, and PZ003. The elevation circuit closed within an acceptable limit.

The site is located in the Tipton Till Plain physiographic region. The land surface in this area is generally flat to gently undulating and tends to be poorly drained. The bedrock consists of Silurian age limestone and dolomite of the Wabash Formation, which is overlain by unconsolidated Wisconsinian aged silts and sands. Depth to bedrock in this area ranges from approximately 50 to 100 feet below grade. The bedrock in this area is controlled by the

Cincinnati Arch which trends northwest across the basin. The Logansport municipal wells encountered limestone bedrock between 68 and 89 feet below grade. The eastern most wells (wells 2 and 3) encountered bedrock at shallower depths (68 and 69 feet below grade) than the remaining wells which encountered bedrock from 80 to 89 feet below grade.

The surface geology consists of limestone and dolomite along the Wabash River. Undifferentiated outwash lies south of the river in the central portion of the WHPA. Loam till associated with the Wisconsin aged Huron-Erie lobe is found in the southern portion of this WHPA. The boring logs for the five municipal wells indicate "top soil" was encountered in most of the borings and ranged from 1 to 5 feet thick. A series of sand, gravel, and boulder layers with varying amounts of clay were encountered below the soil layer. No significant confining layers were noted in the boring logs for the five municipal wells. Layers of clay (1 to 3 feet thick) were noted in some, but not all, of the wells indicating the clay is discontinuous along the river.

A review was completed of the soil maps found in the Soil Survey of Cass County, Indiana. Soils in this area tend to be silt and/or clay loams which range from well to poorly drained. The soil series consist of the Newglarus and Miami series along the Wabash River valley; the Rush, Kosciusko, Gilford, and Sleeth series south of the Wabash River; and the Cyclone, Fincastle, Russel, and Miami series at the southernmost end of the WHPA.

Based on the laboratory data generated during this investigation there appears to be a CLP analyte (tetrachloroethylene) impacting the local ground water supply. The levels are below MCL's, however the contaminant is consistently being detected in the Logansport

wells. The contaminant was not found in any other soil or ground water sampling location selected during this SI. The laboratory results are available in Appendix D.

4.3 Surface Water Pathway

No surface water samples were collected as part of this SI investigation. The study area's nearest surface water body is the Wabash River. The Wabash is located approximately 250-300 feet north of the wells (flows east to west). It is not known if the river has been impacted by the contamination. Based on visual observation and the close proximity to the river, it is presumed that surface water from the site flows north into the Wabash River.

The surface water pathway discussion addresses three (3) potential threats; drinking water threat, human food chain threat, and the environmental threat.

4.3.1 Drinking Water Threat

Approximately 4,590 residents of the City of Logansport are served by municipal wells. The remaining 6,105 residents are served by a surface water intake located in the Eel River approximately 2.5 miles upstream of the municipal wells. There are no surface water intakes within the 15-mile downstream surface water pathway from the Site.

4.3.2 Human Food Chain Threat

The human food chain threat category specifically targets fisheries potentially affected by the migration of contaminants from the site. The primary fishery within the 15-mile surface water pathway from the site is the Wabash River.

The principle uses of this river are fishing and recreation. The Wabash River is considered a fishery since food chain species (fish) are routinely taken for human consumption. PCE is not known to bioaccumulate. The population potentially affected by potential contamination would include persons who use the Wabash River for recreational purposes, such as fishing and swimming. The area surface water and sediments do not appear to be at risk from this project's contaminant of concern.

4.3.3 Environmental Threat

The Indiana Department of Natural Resources (DNR) was contacted to determine if there were any significant natural features or endangered, threatened, and rare species located within one (1) mile of the subject site. According to the IDNR, there are three special interest items identified in the study area:

- The Bald Eagle (nest record approximately 1.25 miles northwest of site), protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act and listed on the state endangered list;
- The Tippecanoe Darter, a fish listed on the state species of special concern; and
- The Purple Oat, a plant listed on the state endangered list. The Tippecanoe Darter and the Purple Oat have both been identified within one mile of the site. The details can be found in Appendix H.

This investigation was limited to ground water and subsurface soil, therefore, the DNR listed species do not appear to be at risk based on our current site information. This investigation did not include surface soil data which presents a source of uncertainty for this pathway. However, as the only identified contaminant of concern is PCE this pathway would not be the primary pathway of concern for this contaminant. PCE is a volatile organic compound that can evaporate or pass through soil as a gas. PCE is not known to build up in plants or animals.

4.4 Air Pathway

No air samples were collected. A release of CLP analytes to the air was not documented during the investigation of the Logansport Municipal Wellfield site. Field screening instrumentation recorded no elevated contaminant readings while collecting the media samples. Presently, there is no historical documented release of contaminants to the air at the Site. There does not appear to be a potential risk to the community by a release to the air pathway.

4.5 Soil Exposure

Subsurface soil samples were obtained for the evaluation of this pathway during the Logansport Wellfield SI. The samples were collected in an attempt to identify potential sources in the study area. There were no surface soil samples collected during this investigation.

According to State and local file information reviewed by staff, and interviews with local officials, there is no documentation of an incident of direct contact with CLP analytes in the study area. There are approximately 408 people living within a one-mile radius of the study area. This target population was calculated by utilizing ArcView Geographic Information Systems Software along with United States Census Bureau population statistics for 2001.

Based on laboratory data generated during this investigation there does not appear to be a soil exposure risk to the public from CLP analytes associated with this site. Acetone, a possible laboratory contaminant, was the only analyte detected above three (3) times background in the subsurface soil (Sample SS-7 at 44 ppb).

4.6 Summary

The City of Logansport Wellfield SI attempted to gather information necessary to evaluate the site as a candidate for the NPL. Environmental samples were collected to determine the presence of hazardous substances at potential source area locations and in the possible migration pathways. In addition, information was collected to confirm target populations and environments potentially at risk from the site.

The City of Logansport operates five (5) ground water production wells that supply part of the Logansport area (approximately 4,590) with potable drinking water. In 1994, the City of Logansport reported to IDEM trace levels of Volatile Organic Compounds (VOC's) in their wells.

IDEM's SI took place in August of 2008, which included subsurface soil sampling and ground water sampling. The samples were analyzed for VOC's. The lab analysis revealed detectable levels of VOC's in the City of Logansport's municipal wells, but no notable detections were reported in any of the other ground water samples or any of the subsurface soil samples.

IDEM's August 2008 Site Investigation was unable to locate a potential source of the PCE which has been detected in the Logansport municipal wells. Additional research into source identification and additional field work will be necessary to completely assess the Logansport Municipal Wellfield Site. Even though the documented detections in the Logansport wells are below MCL's at this time, the potential risk to the community remains high.

SECTION 5.0 REFERENCES

- Indiana Department of Environmental Management Drinking Water Branch website, http://www.in.gov/apps/idem/sdwis_state/ .
- USGS Topographic Map, Indiana Department of Environmental Management, ARC-GIS v.9.2.
- Indiana Department of Environmental Management, Preliminary Assessment Report, Logansport Wellfield, Dan Chesterson, Site Investigation Section, May 9, 2008.
- Agency for Toxic Substances and Disease Registry (ATSDR), ToxFAQ for tetrachloroethylene, 2007, U.S. Department of Health and Human Services, www.atsdr.cdc.gov/tfacts18.html .
- Indiana Department of Natural Resources, Division of Nature Preserves, Endangered, Threatened, and Rare Species, Indianapolis, Indiana.
- Indiana Department of Natural Resources, Water Well Record Database, http://www.in.gov/dnr/water/ground_water/well_database/index.html .
- U.S. Bureau of Census, 2000. 2000 Census of Population, Characteristics of the Population, General Population Characteristics, Indiana, Washington, D.C. U.S. Bureau of Census TIGER Data.
- Wellhead Protection Plan, Logansport Municipal Utilities, WHPA, Inc., March 2001.

Appendix A

Tables

Table 1 - Ground Water Sample Location and Comment Table

Table 2 - Subsurface Soil Sample Location and Comment Table

Table 3 - Key Findings List for Ground Water

Table 4 - Key Findings List for Subsurface Soil

Table 1
Ground Water
Sample Location and Comment Table

Station ID	Sample ID	Location	Depth	Comments
GW-1	E2QK0	Municipal Well #2.	69 ft.	Clear, odorless.
GW-2	E2QK1	Municipal Well #2 (Duplicate of E2QK0).	69 ft.	Clear, odorless.
GW-3	E2QK2	Municipal Well #3.	70 ft.	Clear, odorless.
GW-4	E2QK3	Municipal Well #4.	88 ft.	Clear, odorless.
GW-5	E2QK4	Municipal Well #5.	80 ft.	Clear, odorless.
GW-6	E2QK5	Private well located at 2452 Burlington Ave.	Unknown	Water turns white when acidified, clears in 1 minute, smells like rotten eggs. Background Sample.
GW-7	E2QK6	1574 W. Private Rd. C.R. 250 S.	May be 200 ft.	Clear, odorless. Background Sample.
GW-8	E2QK7	QA/QC (reverse osmosis).	N/A	Trip blank.
GW-9	E2QL1	Boring #2; Logansport State Hospital property, north of hospital, south of Wabash River, near LSH exercise trail, east of electrical bldg.	30 ft.	Refusal at approximately 30 feet.
GW-10	E2QL7	Boring #5; north side of W. County Road 200 S., west of Logansport State Hospital entrance, east of Arrowhead Dr.	14-17.5 ft.	Slightly silty.
GW-11	E2QL4	Boring #3; Logansport State Hospital, approx. 30 ft. north of water tower.	8-11 ft.	Silty.
GW-12	E2QL9	Boring #4; north side of W. County Road 200 S., north of State Highway Garage.	7.5-11 ft.	Slightly silty.
GW-13	E2QM0	Boring #4; Duplicate of E2QL9.	7.5-11 ft.	Slightly silty.
GW-14	E2QM1	QA/QC.	N/A	Trip blank.
GW-15	E2QM4	Boring #8; Tinnerman-Palnut, approx. 100 ft. north of west building.	9.5-13 ft.	Clear.
GW-16	E2QN0	QA/QC.	N/A	Trip blank.
GW-17	E2QM7	Boring #7; east side of S. County Road 125 W., north of Gangloff Trucking, south of Tyson.	12.5-15 ft.	Lower aquifer (dark sandy soil).
GW-18	E2QM8	Boring #7; Duplicate of E2QM7.	12.5-15 ft.	See E2QM7.

Table 1 (Con't.) Ground Water Sample Location and Comment Table				
GW-19	E2QM9	Boring #7; Same location as	10-11.5 ft.	Distinct aquifer, lighter soil above
GW-20	E2QN2	Residential well; 2927 S. County Road 175 W.	84 ft.	Clear. Background Sample.
GW-21	E2QN5	QA/QC.	N/A	Rinsate blank taken after soil sample at Boring #9.
GW-22	E2QN4	QA/QC.	N/A	Equipment blank taken after soil sample at Boring #9.

Table 2
Subsurface Soil
Sample Location and Comment Table

Station ID	Sample ID	Location	Depth	Comments
SS-1	E2QL2	Boring #1; north of Logansport State Hospital compost area at tree line above ridge.	3 ft.	No water sample at this location; refusal at 7 ft.
SS-2	E2QL0	Boring #2; north of Logansport State Hospital, south of Wabash River, near LSH exercise trail, east of electrical bldg.	24-25 ft.	Saturated med. brown fine-to-coarse sand w/ gravel and some silt/clay.
SS-3	E2QL3	Boring #3; Logansport State Hospital property, approx. 30 ft. north of water tower.	7 ft.	Wet plastic mottled brown clay.
SS-4	E2QL5	Boring #3; Logansport State Hospital property, approx. 30 ft. north of water tower.	15 ft.	Red-brown, very hard silty clay, trace gravel and sand; red/black/green mottles.
SS-5	E2QL6	Boring #5; north side of County Road 200 S., west of Logansport State Hospital entrance, east of Arrowhead Dr.	17 ft.	Brown muddy; rounded gravel
SS-6	E2QM2	Boring #6; ABC Metals, northwest corner of property near corn field.	7-10 ft.	Light brown silt with gravel, refusal at 10 ft. No water sample at this location.
SS-7	E2QM3	Boring #8; Tinnerman-Palnut Industries, approx. 100 ft. north of west building.	11.5 ft.	Brown muddy sandy gravel, wet and compacted.
SS-8	E2QM5	Boring #7; east side of S. County Road 125 W., north of Gangloff Trucking, south of Tyson.	11.5 ft.	Hard brown sandy, clayey silt and gravel.
SS-9	E2QM6	Boring #7; Duplicate of E2QM5.	11.5 ft.	Soil slightly lighter in color and more sandy than E2QM5 (due to thin soil layer).
SS-10	E2QN1	Boring #10; north side of County Road 300 S., 100 yds. West of State Road 29.	11.75 ft.	Wet brown silty fine sand, sharp color change to redder brown at 11.75 ft. Background sample.
SS-11	EPQN3	Boring #9; east side of County Road 175 W., 200 yds. North of County Road 300 S.	11 ft.	Wet muddy gravel (mostly water). Background sample.
SS-14	E2QL8	Boring #4; north of W. County Road 200 S., north of State Highway Garage.	3 ft.	Smear zone; brown mud and quarter-inch gravel.

Table 3 Key Findings List Ground Water				
<u>Sample Number</u>	<u>Contaminants</u>	<u>EPA MCL</u>	<u>3X Background</u>	<u>Level</u>
GW-1 (Municipal Well #2)	Tetrachloroethylene	5.0 ppb	1.5 ppb	1.2 ppb
GW-2 (Municipal Well #2 - dup.)	Tetrachloroethylene	5.0 ppb	1.5 ppb	1.2 ppb
GW-3 (Municipal Well #3)	Tetrachloroethylene	5.0 ppb	1.5 ppb	1.6 ppb
GW-4 (Municipal Well #4)	Tetrachloroethylene	5.0 ppb	1.5 ppb	1.7 ppb
GW-5 (Municipal Well #5)	Tetrachloroethylene	5.0 ppb	1.5 ppb	2.0 ppb
Bold - Exceeds 3X background				

Table 4 Key Findings List Subsurface Soil				
<u>Sample Number</u>	<u>Contaminants</u>	<u>EPA MCL</u>	<u>3X Background</u>	<u>Level</u>
SS-7	Acetone	N/A	33 ppb	44 ppb
Bold - Exceeds 3X background				

Appendix B

Site Maps

Figure 1 – Site Location Aerial Photograph

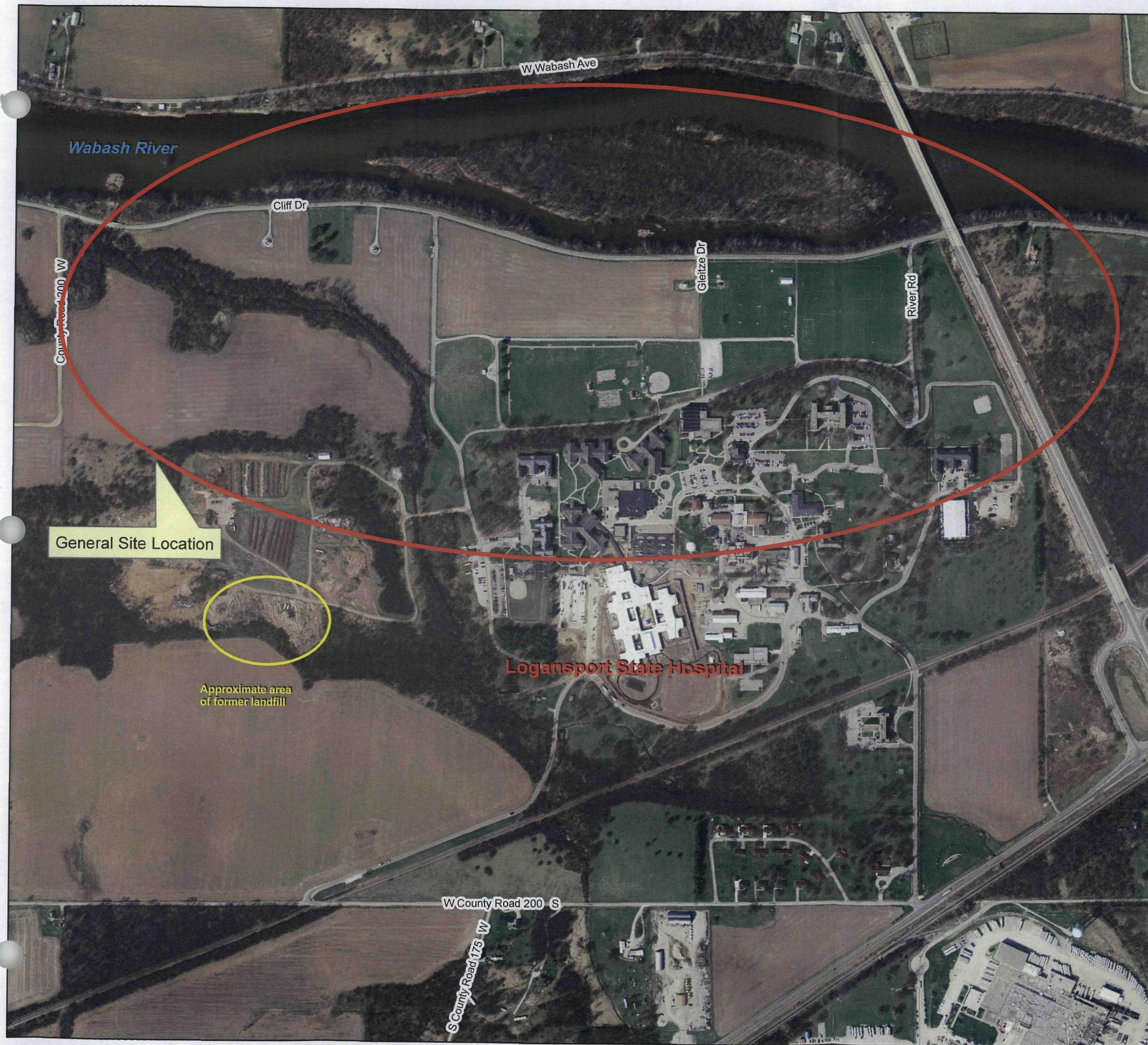
Figure 2 – Site Location Topographic Map

Figure 3 – Sample Location Map

Figure 4 – Tetrachloroethylene Detection Map

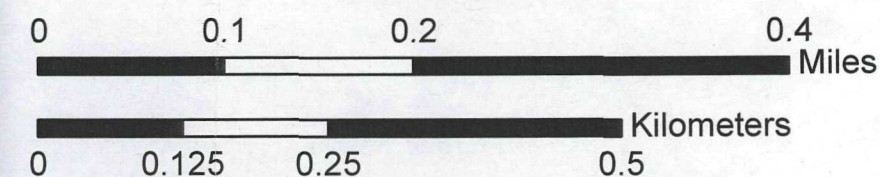
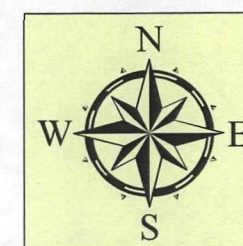
Figure 5 – 15-Mile Surface Water Map


Figure 6 – 4-Mile Radius Map



IDEM
INDIANA DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT

Logansport Wellfield
Site Location Aerial
Photograph
Logansport, Cass County,
Indiana



 General Site Location

Mapped by Dan Chesterson, IDEM, Office of Land Quality,
 Site Investigation Section, January 22, 2009.

Map Projection: UTM Zone 16N Map Datum: NAD 1983

Sources: Orthophotography obtained from Indiana Map
 Framework Data
 Non-Orthophotography obtained from the State of Indiana
 Geographical Information Office Spatial Database Engine
 Census 2000 City Boundaries
 Indiana Department of Transportation Road Layer

Disclaimer: This map geographically depicts locations and is
 not intended for any other purpose.

Logansport Wellfield

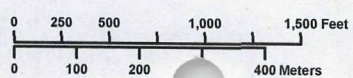
Cliff Drive, Logansport, Cass County, Indiana

Sample Location Map



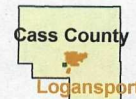
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Mapped By: Diane Osborn, Office of Land Quality
Date: January 13, 2009



Label
IDEM Boring Name
IDEM Sample Number
Sample Depth when applicable

- Ground Water Sample Location
- Subsurface Soil Sample Location



Sources:
Non Orthophotography Data
- Obtained from the State of Indiana
Geographical Information Office Library
Orthophotography
- Obtained from 2005 Indiana Map
Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N
Map Datum: NAD83

Logansport Wellfield

Cliff Drive, Logansport, Cass County, Indiana

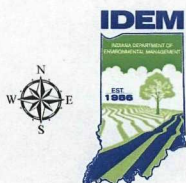
Tetrachloroethylene (PCE) Concentration Map



This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Mapped By: Diane Osborn, Office of Land Quality
Date: January 13, 2009

0 250 500 1,000 1,500 Feet
0 100 200 400 Meters



Label:
IDEM Boring Name
IDEM Sample Number
EPA Number
Sample Depth when applicable
Concentration result in part per billion (ppb) if detected
Sample Type

● Ground Water Sample Location
▲ Subsurface Sample Location



Cass County
Logansport

Sources:
Non Orthophotography Data
- Obtained from the State of Indiana
Geographical Information Office Library
Orthophotography
- Obtained from 2005 Indiana Map
Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N
Map Datum: NAD83

SDMS US EPA Region V

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Appendix C

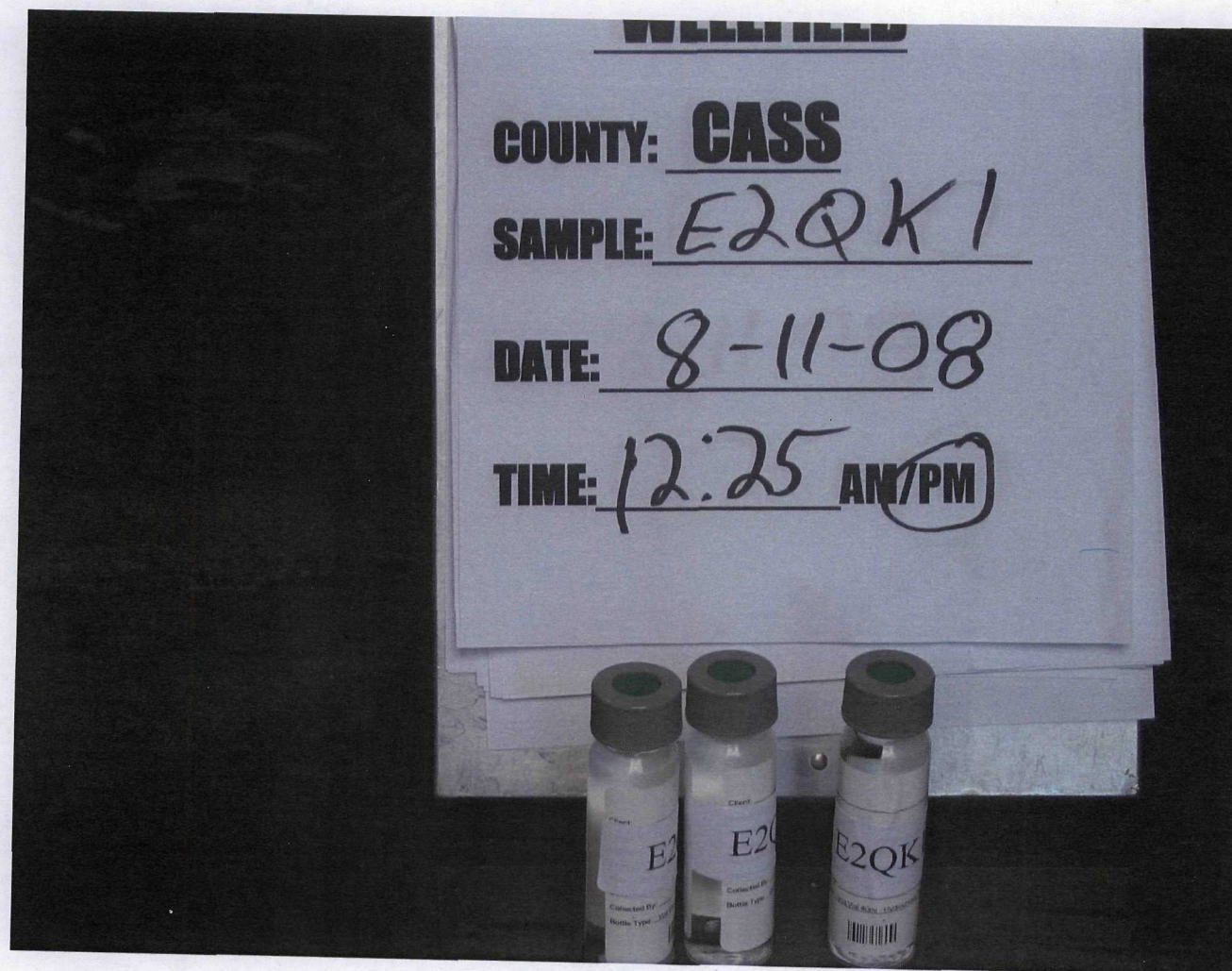
IDEM Sample Photographs

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QK0 **DATE:** 8/11/08 **TIME:** 12:25 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Drinking water **PHOTO BY:** Mark Jaworski
DESCRIPTION: Sample taken from Municipal Well #2

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QK1 DATE: 8/11/08 TIME: 12:25 PM WEATHER: Sunny, mild
SAMPLE TYPE: Drinking water PHOTO BY: Mark Jaworski
DESCRIPTION: Sample taken from Municipal Well #2

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272.



SAMPLE ID#: E2QK1 **DATE:** 8/11/08 **TIME:** 12:25 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Drinking water **PHOTO BY:** Mark Jaworski
DESCRIPTION: Sample taken from Municipal Well #2

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



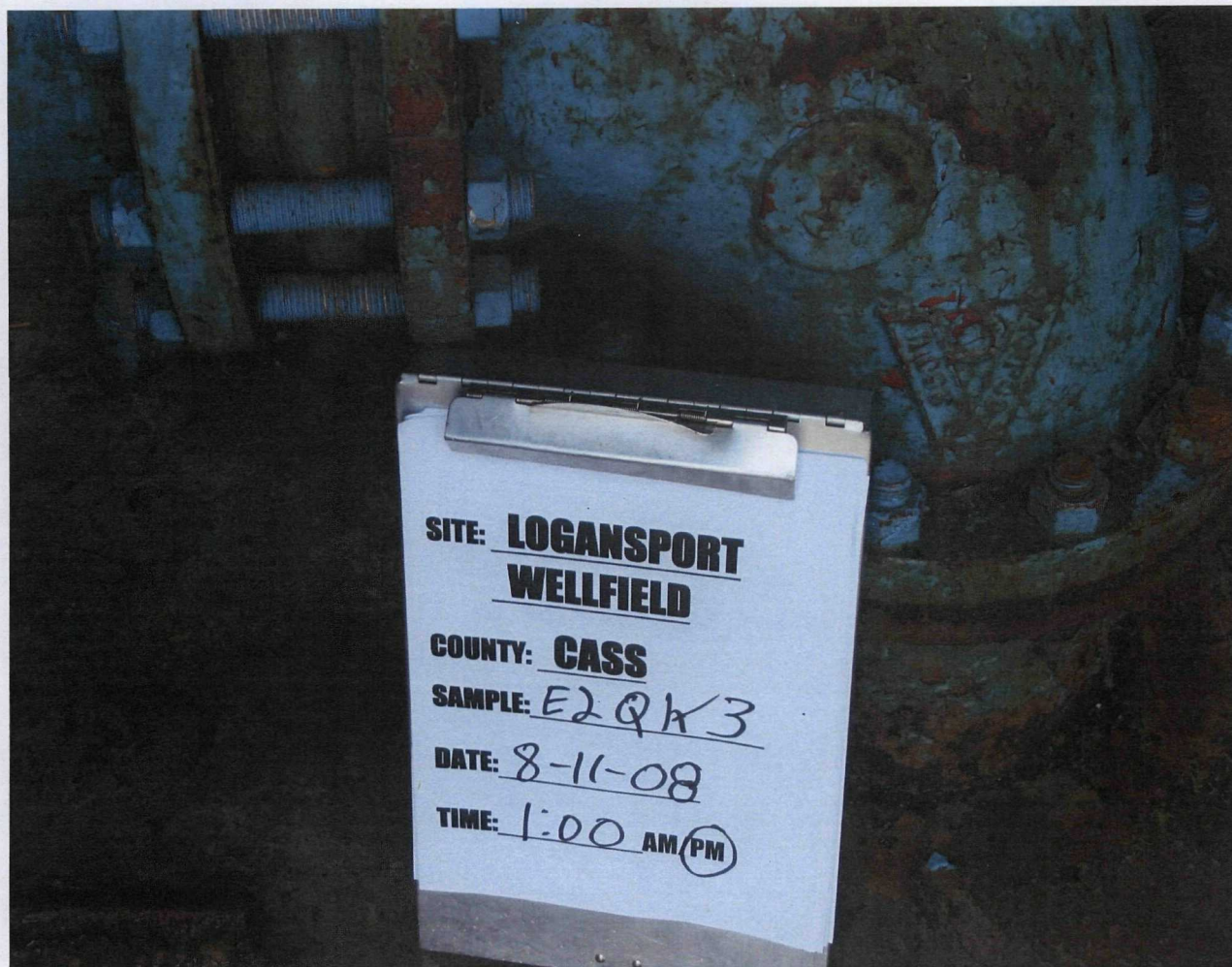
SAMPLE ID#: E2QK2 DATE: 8/11/08 TIME: 12:45 PM WEATHER: Sunny, mild
SAMPLE TYPE: Drinking water PHOTO BY: Mark Jaworski
DESCRIPTION: Sample taken from Municipal Well #3 Water has been chlorinated.

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QK2 **DATE:** 8/11/08 **TIME:** 12:45 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Drinking water **PHOTO BY:** Mark Jaworski
DESCRIPTION: Sample taken from Municipal Well #3 Water has been chlorinated.

LOGANSPOORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QK3 DATE: 8/11/08 TIME: 1:00 PM WEATHER: Sunny, mild
SAMPLE TYPE: Drinking water PHOTO BY: Mark Jaworski
DESCRIPTION: Sample taken from Municipal Well #4

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QK3 **DATE:** 8/11/08 **TIME:** 1:00 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Drinking water **PHOTO BY:** Mark Jaworski
DESCRIPTION: Sample taken from Municipal Well #4

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



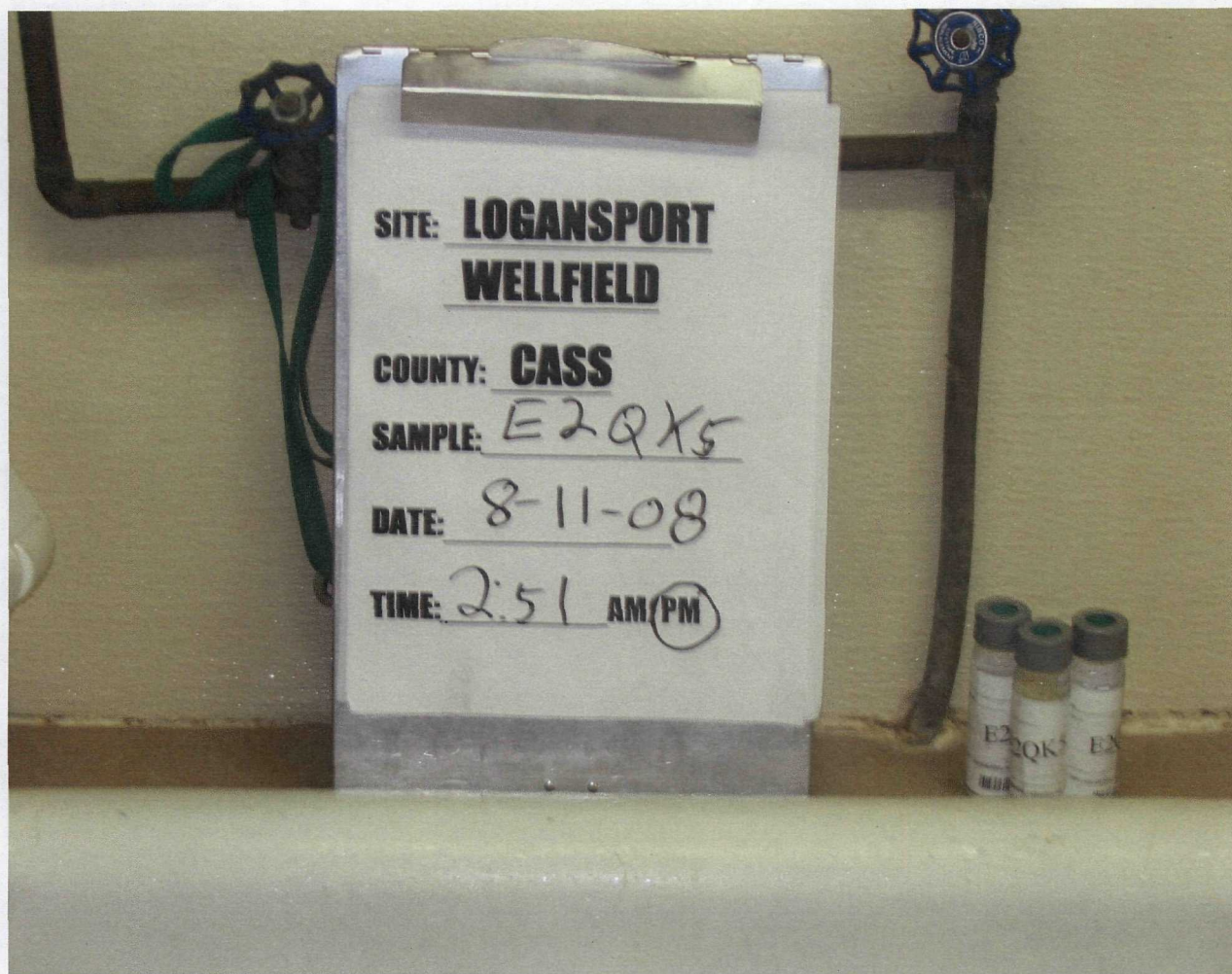
SAMPLE ID#: E2QK4 DATE: 8/11/08 TIME: 1:08 PM WEATHER: Sunny, mild
SAMPLE TYPE: Drinking water PHOTO BY: Mark Jaworski
DESCRIPTION: Sample taken from Municipal Well #5 Water has been chlorinated

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QK4 **DATE:** 8/11/08 **TIME:** 1:08 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Drinking water **PHOTO BY:** Mark Jaworski
DESCRIPTION: Sample taken from Municipal Well #5 Water has been chlorinated

LOGANSPOORT WELL FIELD
U.S. EPA ID# INN000510272



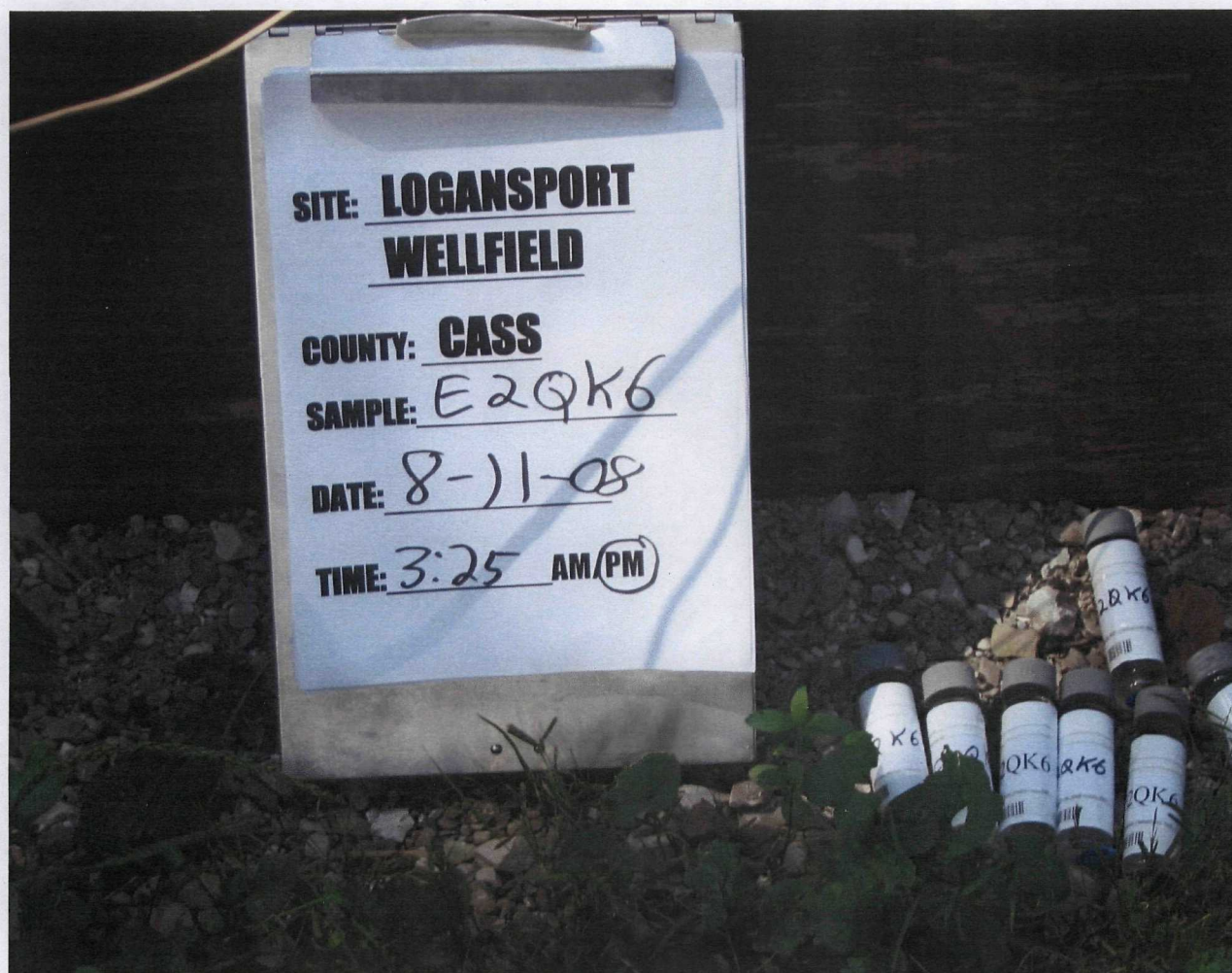
SAMPLE ID#: E2QK5 **DATE:** 8/11/08 **TIME:** 2:51 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Drinking water **PHOTO BY:** Mark Jaworski
DESCRIPTION: Sample taken from Cass County Animal Hospital; 2452 Burlington Avenue

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



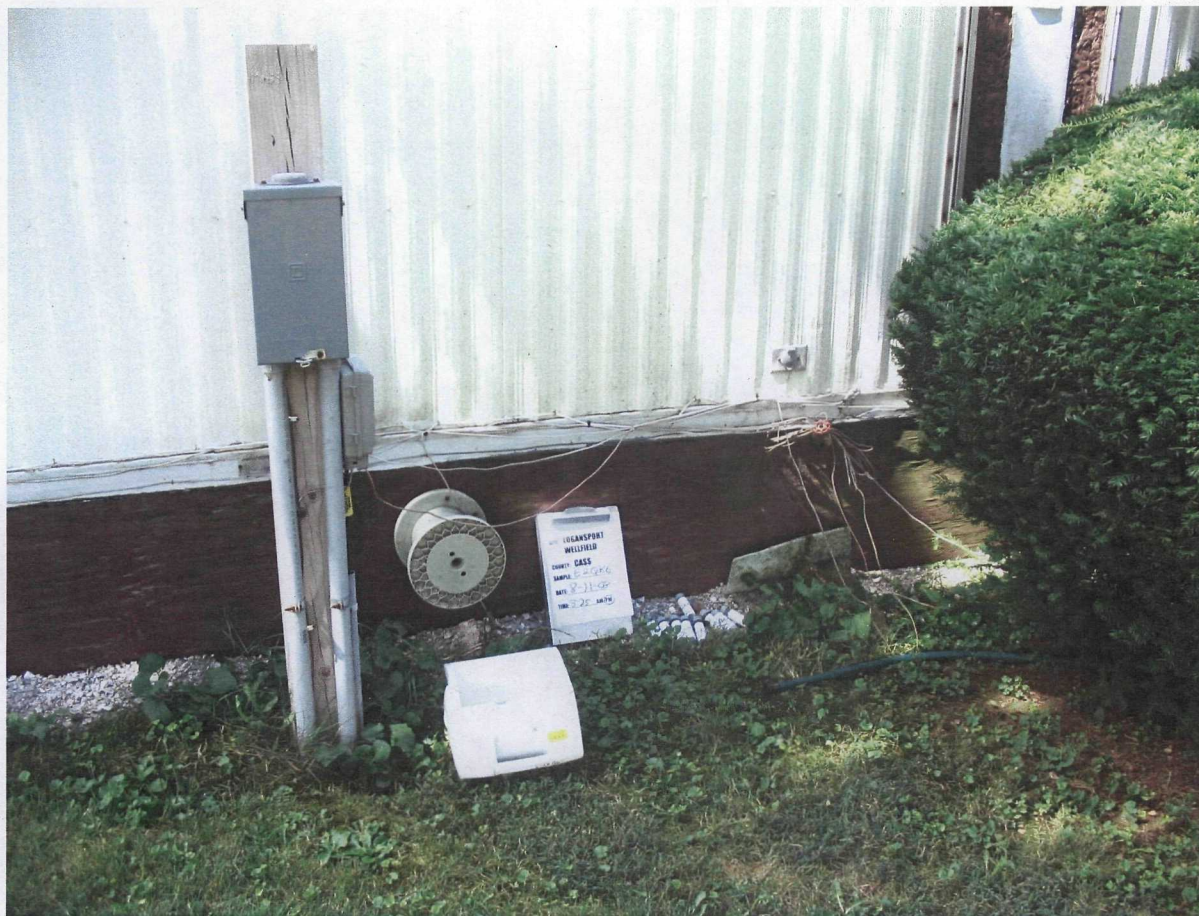
SAMPLE ID#: E2QK5 **DATE:** 8/11/08 **TIME:** 2:51 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Drinking water **PHOTO BY:** Mark Jaworski
DESCRIPTION: Sample taken from Cass County Animal Hospital; 2452 Burlington Avenue

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QK6 **DATE:** 8/11/08 **TIME:** 3:25PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Drinking water **PHOTO BY:** Mark Jaworski
DESCRIPTION: Sample taken from 1574 West Private Road; 250 South; depth of well 200'

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QK6 **DATE:** 8/11/08 **TIME:** 3:25 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Drinking water **PHOTO BY:** Mark Jaworski
DESCRIPTION:

LOGANSPOORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL0 DATE: 8/11/08 TIME: 12:25 PM WEATHER: Sunny, mild
SAMPLE TYPE: Soil PHOTO BY: Dan Chesterson
DESCRIPTION: Boring #2; north of Logansport State Hospital, south of Wabash River, near Logansport State Hospital exercise trail, east of electrical building

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL0 **DATE:** 8/11/08 **TIME:** 12:25 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterson
DESCRIPTION: Boring #2; north of Logansport State Hospital, south of Wabash River, near Logansport State Hospital exercise trail, east of electrical building

LOGANSPOORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL1 **DATE:** 8/11/08 **TIME:** 1:55 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Groundwater **PHOTO BY:** Dan Chesterson
DESCRIPTION: Boring #2; Logansport State Hospital property, north of hospital, south of Wabash River,
near LSH exercise trail, east of electrical building

LOGANSPOORT WELL FIELD
U.S. EPA ID# INN000510272



SA
MPLE ID# E2QL1 **DATE:** 8/11/08 **TIME:** 1:55 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Groundwater **PHOTO BY:** Dan Chesterson
DESCRIPTION: Boring #2; Logansport State Hospital property, north of hospital, south of Wabash River,
near LSH exercise trail, east of electrical
building

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL2 **DATE:** 8/12/08 **TIME:** 8:30 AM **WEATHER:** Sunny, mild
SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterson
DESCRIPTION: North of compost area (north of landfill area) at tree line above ridge – bedrock at 6-7' – no water – sample taken at 3'

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL2 **DATE:** 8/12/08 **TIME:** 8:30 AM **WEATHER:** Sunny, mild
SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterson
DESCRIPTION: North of compost area (north of landfill area) at tree line above ridge – bedrock at 6-7' – no water – sample taken at 3'

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL3 DATE: 8/12/08 TIME: 9:35 AM WEATHER: Sunny, mild
SAMPLE TYPE: Soil PHOTO BY: Dan Chesterson
DESCRIPTION: North of water tower – 7' deep

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL3

DATE: 8/12/08

TIME: 9:35 AM

WEATHER: Sunny, mild

SAMPLE TYPE: Soil

PHOTO BY: Dan Chesterson

DESCRIPTION: North of water tower – 7' deep

LOGANSPOORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL4 DATE: 8/12/08 TIME: 10:30 AM WEATHER: Sunny, mild
SAMPLE TYPE: Ground water PHOTO BY: Dan Chesterson
DESCRIPTION: Boring 3; Logansport State Hospital, approximately 30' north of water tower0

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL4 **DATE:** 8/12/08 **TIME:** 10:30 AM **WEATHER:** Sunny, mild
SAMPLE TYPE: Ground water **PHOTO BY:** Dan Chesterson
DESCRIPTION: Boring 3; Logansport State Hospital, approximately 30' north of water

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL5 DATE: 8/12/08 TIME: 9:55 AM WEATHER: Sunny, mild
SAMPLE TYPE: Soil PHOTO BY: Dan Chesterson
DESCRIPTION: North of water tower – 15' deep

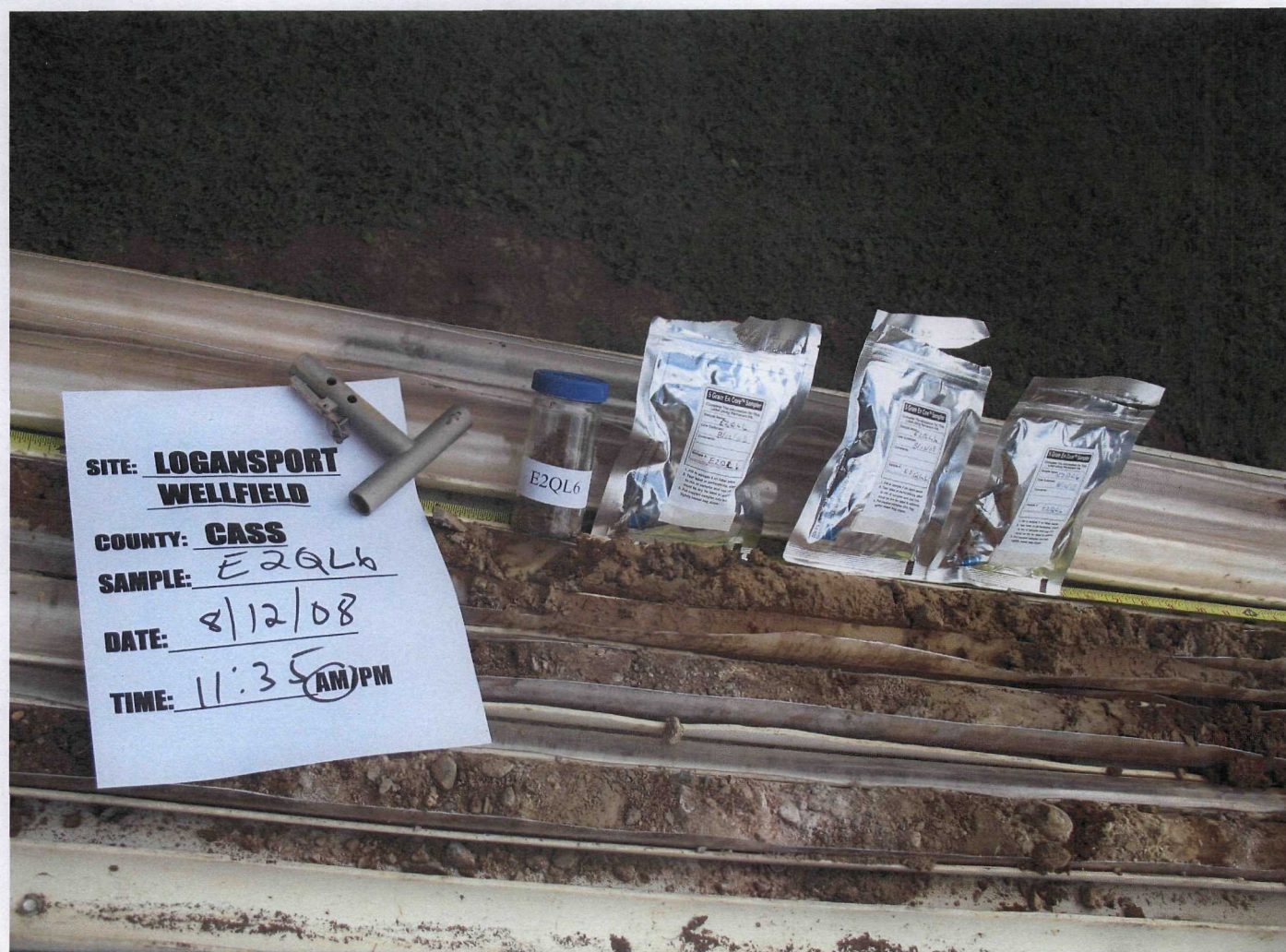
LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL5 **DATE:** 8/12/08 **TIME:** 9:55 AM
SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterson
DESCRIPTION: North of water tower – 15' deep

WEATHER: Sunny, mild

LOGANSPOORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL6 DATE: 8/12/08 TIME: 11:35 AM

WEATHER: Sunny, mild

SAMPLE TYPE: Soil PHOTO BY: Dan Chesterson

DESCRIPTION: North side of West CR 200 South, west of Logansport State Hospital entrance, east of Arrowhead Drive; approximately 40' east of Arrowhead; 12' north of CR 200 South 9north of fence); taken at 17'

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL6 **DATE:** 8/12/08 **TIME:** 11:35 AM

WEATHER: Sunny, mild

SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterson

DESCRIPTION: North side of West CR 200 South, west of Logansport State Hospital entrance, east of Arrowhead Drive; approximately 40' east of Arrowhead; 12' north of CR 200 South 9north of fence); taken at 17'

LOGANSPOORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL7 DATE: 8/12/08 TIME: 12:10 PM WEATHER: Sunny, mild
SAMPLE TYPE: Ground water PHOTO BY: Dan Chesterson
DESCRIPTION: Boring #5; north of West CR 200 South, west of Logansport State Hospital entrance, east of Arrowhead Drive

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL7 **DATE:** 8/12/08 **TIME:** 12:10 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Ground water **PHOTO BY:** Dan Chesterson
DESCRIPTION: Boring #5; along north of West CR 200 South, west of Logansport State Hospital entrance, east of Arrowhead Drive

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



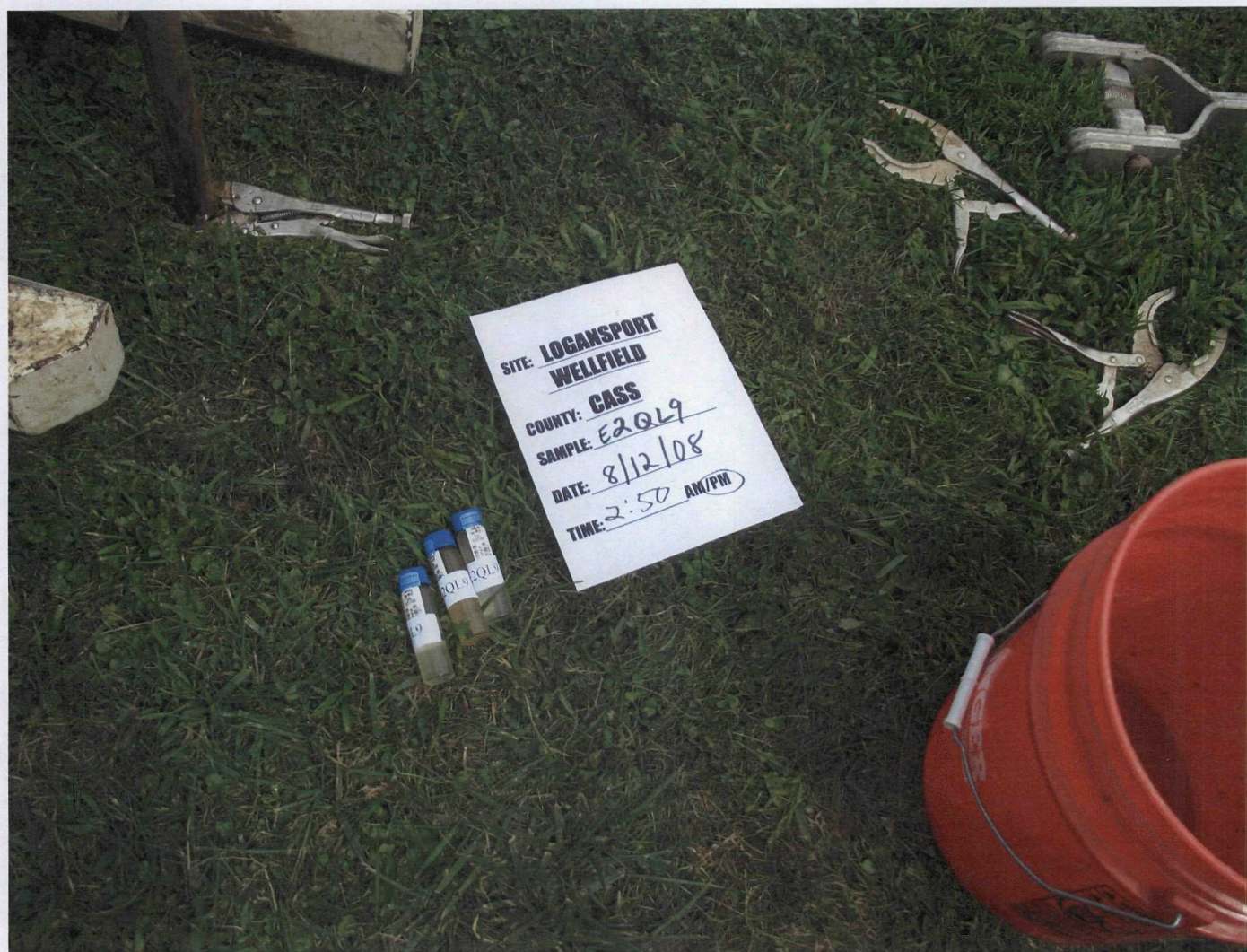
SAMPLE ID# E2QL8 DATE: 8/12/08 TIME: 2:10 PM WEATHER: Sunny, mild
SAMPLE TYPE: Soil PHOTO BY: Dan Chesterson
DESCRIPTION: Boring #4; north of West CR 200 South, north of State Highway Garage; sample taken at 3¼'

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QL8 **DATE:** 8/12/08 **TIME:** 2:10 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterson
DESCRIPTION: Boring #4; north of West CR 200 South, north of State Highway Garage; sample taken at 3 1/4'

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



MPLE ID# E2QL9 DATE: 8/12/08 TIME: 2:50 PM WEATHER: Sunny, mild
SAMPLE TYPE: Ground water PHOTO BY: Dan Chesterson
DESCRIPTION: Boring #4; north side of West County Road 200 South, north of State Highway
Garage

SA

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID# E2QM0 DATE: 8/12/08 TIME: 2:50 PM WEATHER: Sunny, mild
SAMPLE TYPE: Ground water PHOTO BY: Dan Chesterson
DESCRIPTION: Boring #4; north side of West County Road 200 South, north of State Highway Garage

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



SA

MPLE ID# E2QM0 **DATE:** 8/12/08 **TIME:** 2:50 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Ground water **PHOTO BY:** Dan Chesterson
DESCRIPTION: Boring #4; north side of West County Road 200 South, north of State Highway
Garage

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QM2 DATE: 8/13/08 TIME: 9:00 AM WEATHER: Sunny, mild
SAMPLE TYPE: Soil PHOTO BY: Dan Chesterton
DESCRIPTION: Boring #6; ABC Metals, northwest corner of property near corn field

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QM2 **DATE:** 8/13/08 **TIME:** 9:00 AM **WEATHER:** Sunny, mild
SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #6; ABC Metals, northwest corner of property near corn field

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QM3 DATE: 8/13/08 TIME: 10:00 AM WEATHER: Sunny, mild
SAMPLE TYPE: Soil PHOTO BY: Dan Chesterton
DESCRIPTION: Boring #8; Timmerman-Palnut, approximately 100' north of west building

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QM3 **DATE:** 8/13/08 **TIME:** 10:00 AM **WEATHER:** Sunny, mild
SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #8; Timmerman-Palnut, approximately 100' north of west building

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



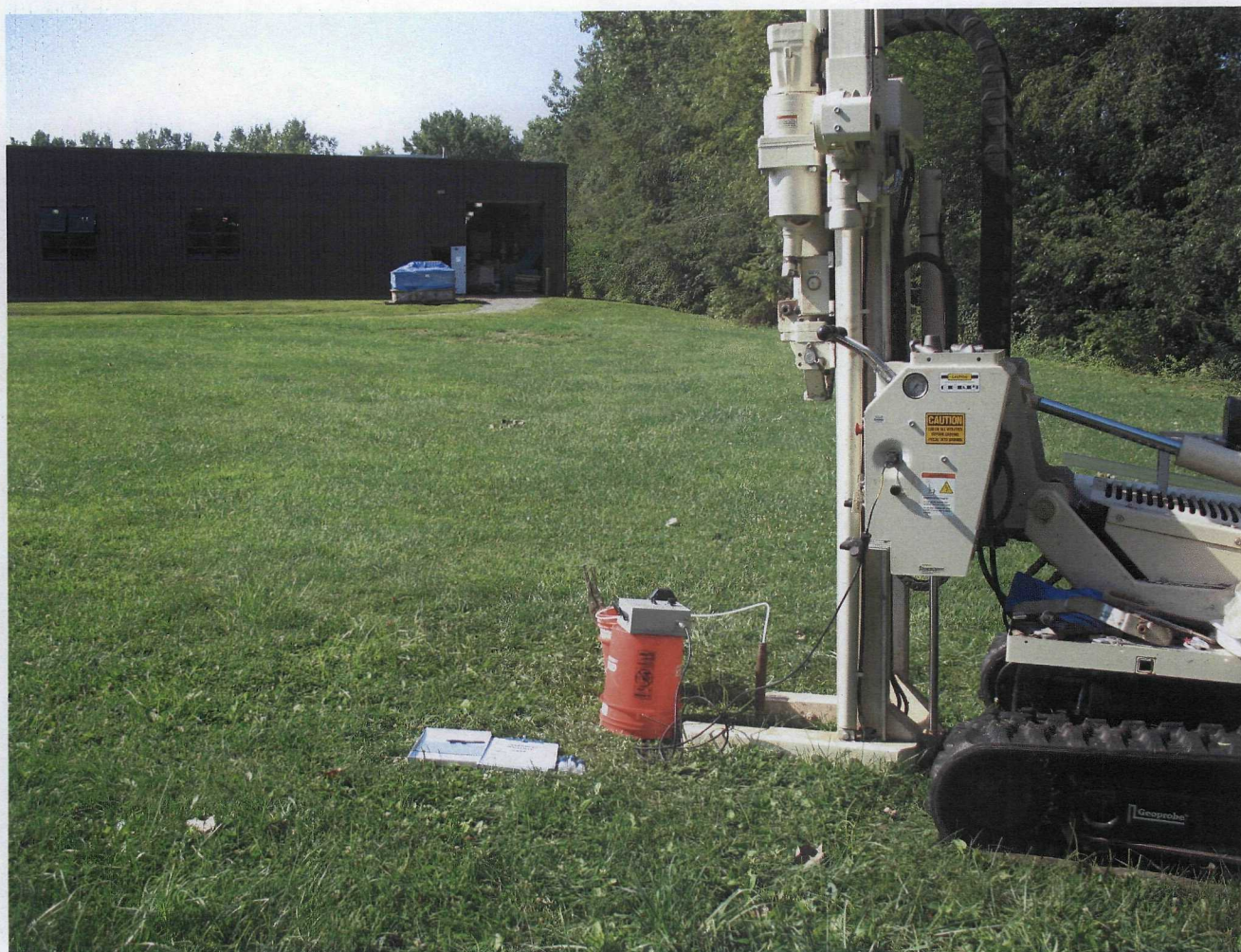
SAMPLE ID#: E2QM3 **DATE:** 8/13/08 **TIME:** 10:00 AM **WEATHER:** Sunny, mild
SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #8; Timmerman-Palnut, approximately 100' north of west building

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



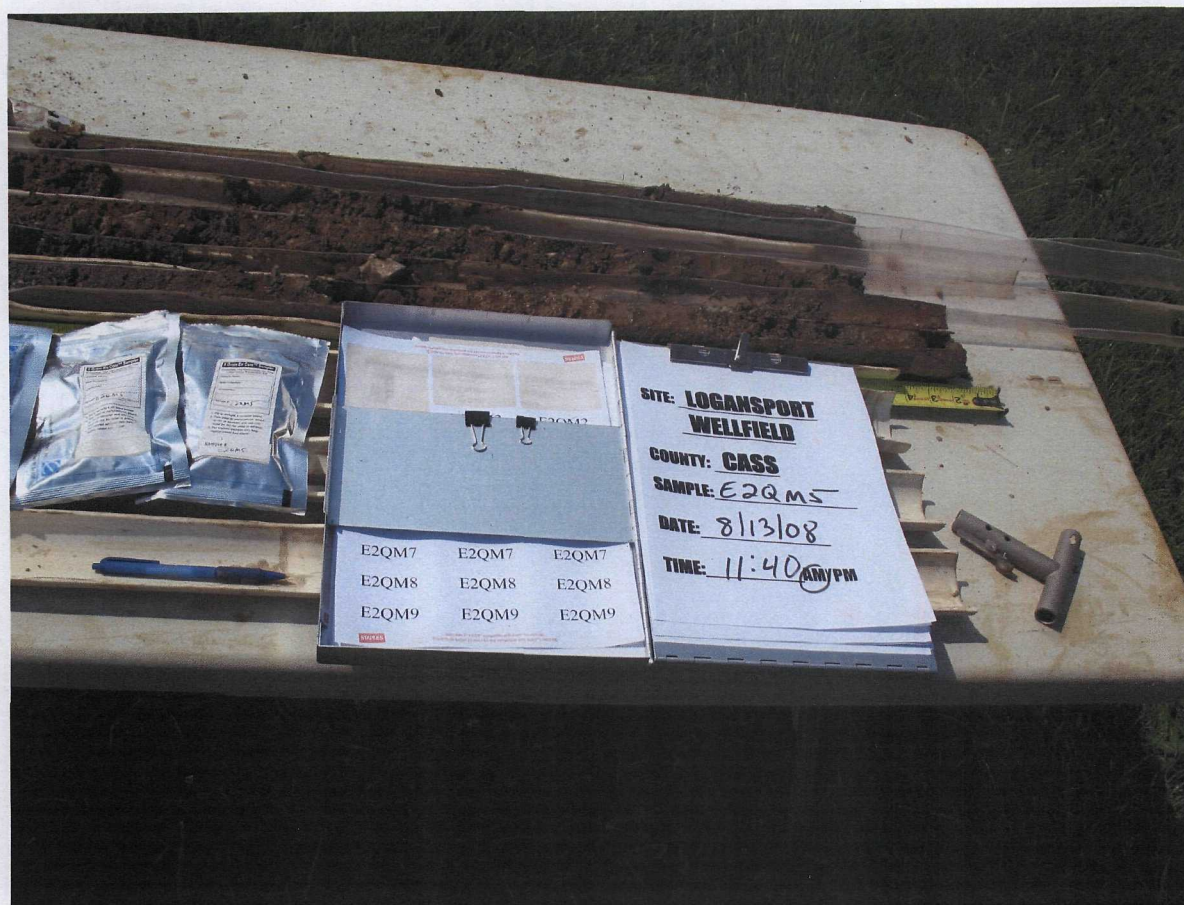
SAMPLE ID#: E2QM4 **DATE:** 8/13/08 **TIME:** 10:45 AM **WEATHER:** Sunny, mild
SAMPLE TYPE: Ground water **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #8; Timmerman-Palnut, approximately 100' north of west building

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QM4 **DATE:** 8/13/08 **TIME:** 10:45 AM **WEATHER:** Sunny, mild
SAMPLE TYPE: Ground water **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #8; Timmerman-Palnut, approximately 100' north of west building

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QM5 **DATE:** 8/13/08 **TIME:** 11:40 AM **WEATHER:** Sunny, mild
SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #7: South County Road 125 West, north of Gangloff Trucking, south of Tyson

LOGANSFORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QM5 **DATE:** 8/13/08 **TIME:** 11:40 AM **WEATHER:** Sunny, mild
SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #7: South County Road 125 West, north of Gangloff Trucking, south of Tyson

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QM6 DATE: 8/13/08 TIME: 11:50 AM WEATHER: Sunny, mild
SAMPLE TYPE: Soil PHOTO BY: Dan Chesterton
DESCRIPTION: Boring #7: South County Road 125 West, north of Gangloff Trucking, south of Tyson

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QM6 **DATE:** 8/13/08 **TIME:** 11:50 AM **WEATHER:** Sunny, mild
SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #7: South County Road 125 West, north of Gangloff Trucking, south of Tyson

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QM7 **DATE:** 8/13/08 **TIME:** 11:55 AM **WEATHER:** Sunny, mild
SAMPLE TYPE: Ground water **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #7: east side of South County Road 125 West, north of Gangloff Trucking, south of Tyson

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QM7 **DATE:** 8/13/08 **TIME:** 11:55 AM **WEATHER:** Sunny, mild
SAMPLE TYPE: Ground water **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #7: South County Road 125 West, north of Gnagloff Trucking, south of Tyson sign

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



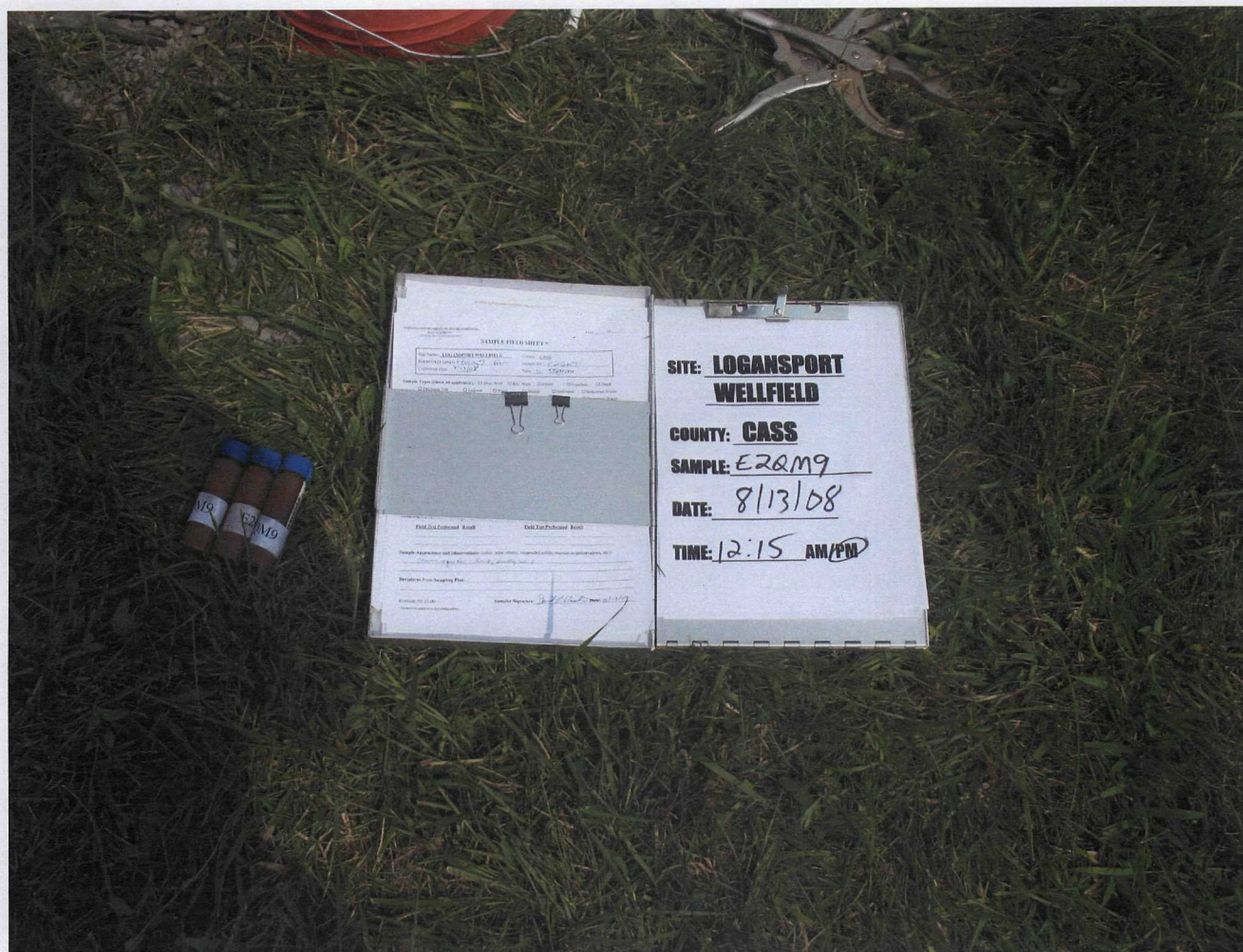
SAMPLE ID#: E2QM8 **DATE:** 8/13/08 **TIME:** 12:05 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Ground water **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #7: South County Road 125 West, north of Tyson, east side of road
20' south of Tyson sign

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QM8 **DATE:** 8/13/08 **TIME:** 12:05 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Ground water **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #7: South County Road 125 West, north of Tyson, east side of road –
20' south of Tyson sign

LOGANSPOORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QM9 **DATE:** 8/13/08 **TIME:** 12:15 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Ground water **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #7: east side of South County Road 125 West, north of Gangloff Trucking, south of Tyson

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QM9 **DATE:** 8/13/08 **TIME:** 12:15 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Ground water **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #7: east side of South County Road 125 West, north of Gangloff Trucking, south of Tyson

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



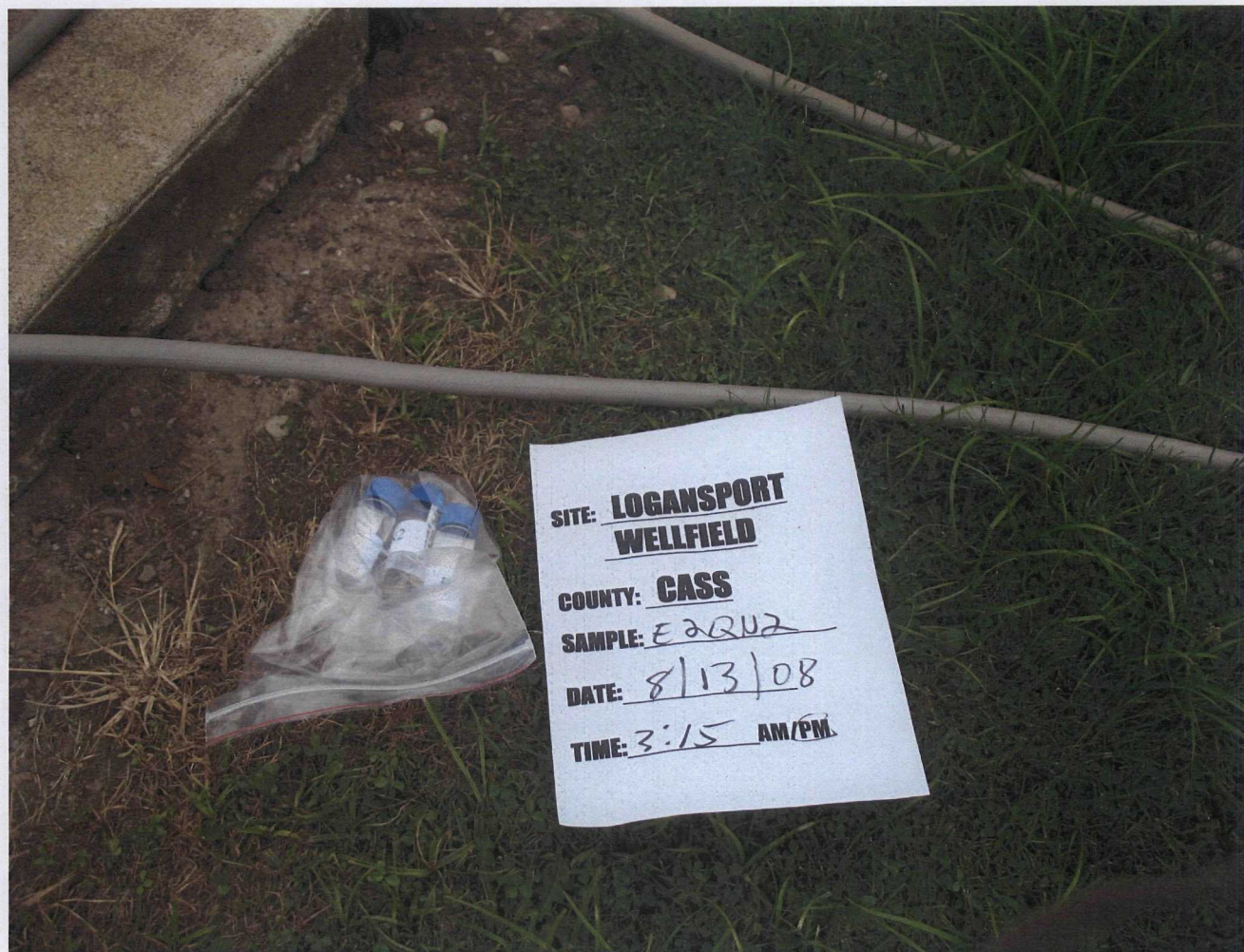
SAMPLE ID#: E2QN1 **DATE:** 8/13/08 **TIME:** 2:25 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterton
DESCRIPTION: Sample taken from Boring #10; north side of County Road 300 South, 100 yards West of State Road 29

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QN1 **DATE:** 8/13/08 **TIME:** 2:25 PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterton
DESCRIPTION: Sample taken from Boring #10; north side of County Road 300 South, 100 yards West of State Road 29

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QN2 DATE: 8/13/08 TIME: 3:15PM WEATHER: Sunny, mild
SAMPLE TYPE: Ground water PHOTO BY: Dan Chesterton
DESCRIPTION: Residential well; 2927 South County Road 175 West

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QN2 **DATE:** 8/13/08 **TIME:** 3:15PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Ground water **PHOTO BY:** Dan Chesterton
DESCRIPTION: Residential well; 2927 South County Road 175 South

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QN3 DATE: 8/13/08 TIME: 3:20PM WEATHER: Sunny, mild
SAMPLE TYPE: Soil PHOTO BY: Dan Chesterton
DESCRIPTION: Boring #9; east side of County Road 174 West, 200 yards north of County Road
300 South

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



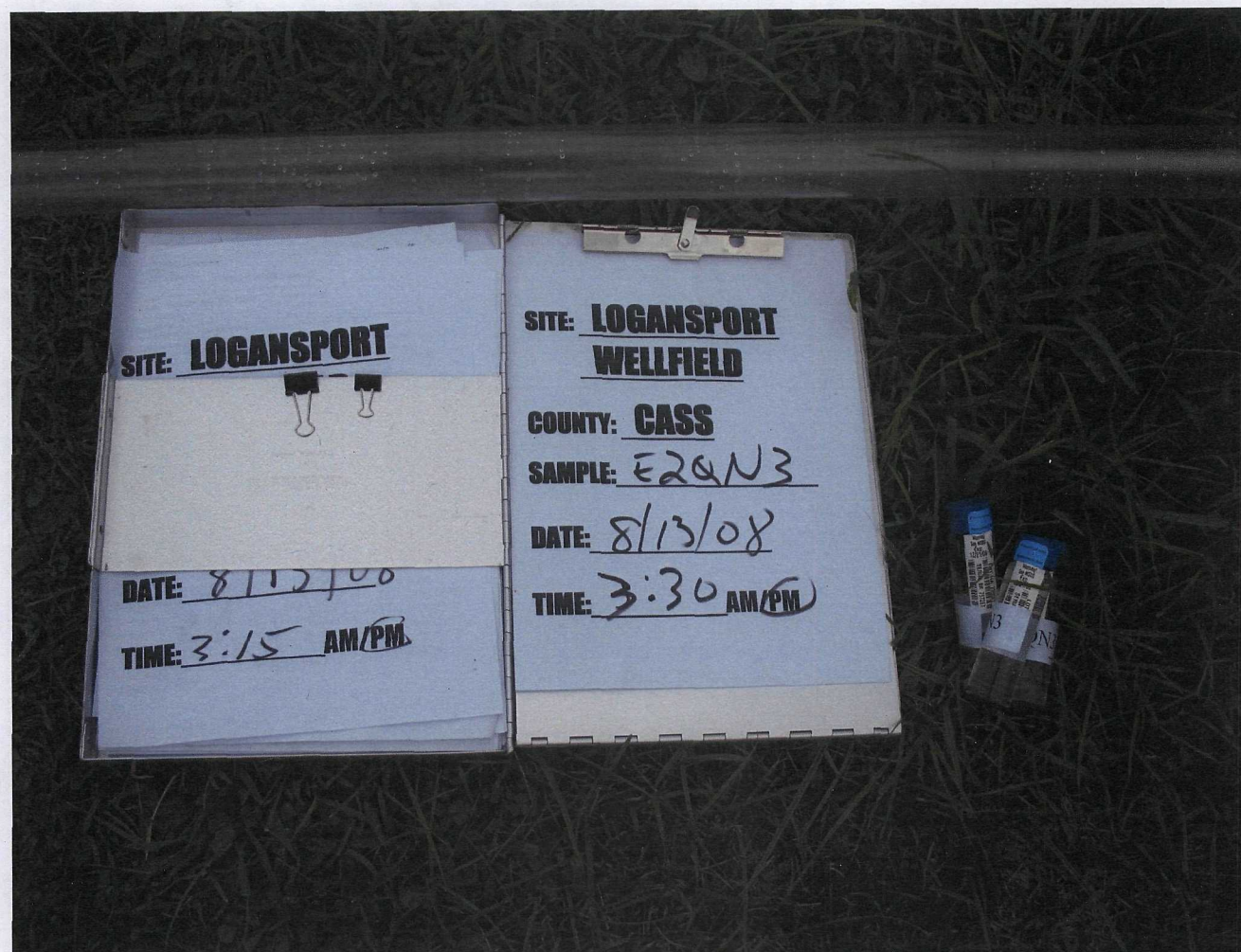
SAMPLE ID#: E2QN3 **DATE:** 8/13/08 **TIME:** 3:20PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Soil **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #9; east side of County Road 174 West, 200 yards north of County Road 300 South

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QN4 **DATE:** 8/13/08 **TIME:** 3:35PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Ground water **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #9; east side of County Road 174 West, 200 yards north of County Road 300 South

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



SAMPLE ID#: E2QN5 **DATE:** 8/13/08 **TIME:** 3:30PM **WEATHER:** Sunny, mild
SAMPLE TYPE: Ground water **PHOTO BY:** Dan Chesterton
DESCRIPTION: Boring #9; east side of County Road 174 West, 200 yards north of County Road 300 South
NOTE: The sample # was changed from E2QN3 to E2QN5 after the photo was taken.

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



DATE: 8/13/08 **WEATHER:** Sunny, mild **PHOTO BY:** Dan Chesterton
DESCRIPTION: Piezometer location P-1, on northern part of Logansport State Hospital property

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



DATE: 8/13/08 **WEATHER:** Sunny, mild **PHOTO BY:** Dan Chesterton
DESCRIPTION: Piezometer location P-2, on northern part of Logansport State Hospital property.

LOGANSPOUT WELL FIELD
U.S. EPA ID# INN000510272



DATE: 8/13/08 **WEATHER:** Sunny, mild **PHOTO BY:** Dan Chesterton
DESCRIPTION: Piezometer location P-3, on northern part of Logansport State Hospital property.

LOGANSPORT WELL FIELD
U.S. EPA ID# INN000510272



DATE: 8/13/08 **WEATHER:** Sunny, mild **PHOTO BY:** Dan Chesterton
DESCRIPTION All three piezometer locations marked by yellow cones, on northern part of
Logansport State Hospital property.

Appendix D

Analytical Data – Subsurface Soil and Ground Water

Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QL0

Site :

LOGANSPORT WELLFIELD

Number of Soil Samples : 12

Lab. :

LIBRITY

Number of Water Samples : 0

Number of Sediment Samples : 0

Sample Number :	E2QL0		E2QL2		E2QL2RE		E2QL3		E2QL5	
Sampling Location :	SS2		SS1		SS1		SS3		SS4	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	8/11/2008		8/12/2008				8/12/2008		8/12/2008	
Time Sampled :										
%Moisture :	10		16		16		2		13	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Chloromethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Vinyl chloride	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Bromomethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Chloroethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Trichlorofluoromethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
1,1-Dichloroethene	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
1,1,2-Trichloro-1,2,2-trifluoroethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Acetone	9.1	U	10	U	10	U	9.4	U	9.3	U
Carbon Disulfide	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Methyl acetate	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Methylene chloride	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
cis-1,2-Dichloroethene	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Methyl tert-butyl ether	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
1,1-Dichloroethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
cis-1,2-Dichloroethane	4.6	U	1.3	J	5.0	U	4.7	U	4.6	U
2-Butanone	9.1	U	10	U	10	U	9.4	U	9.3	U
Bromochloromethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Chloroform	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
1,1,1-Trichloroethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Cyclohexane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Carbon tetrachloride	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Benzene	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
1,2-Dichloroethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
1,4-Dioxane	91	R	100	R	100	R	94	R	93	R
Trichloroethene	4.6	U	1.5	J	5.0	U	0.39	J	4.6	U
Methylcyclohexane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
1,2-Dichloropropane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Bromodichloromethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
cis-1,3-Dichloropropene	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
4-Methyl-2-pentanone	9.1	U	10	U	10	U	9.4	U	9.3	U
Toluene	0.57	J	6.8		5.0	U	2.7	J	1.4	J
trans-1,3-Dichloropropene	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U

DISCLAIMER: This package has been electronically assessed as an added service to our customer. It has not been either validated or approved by Region 5 and any subsequent use by the data user is strictly at the risk of the data user.

Region 5 assumes no responsibility for use of unvalidated data.

Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QL0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	E2QL0		E2QL2		E2QL2RE		E2QL3		E2QL5	
Sampling Location :	SS2		SS1		SS1		SS3		SS4	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	8/11/2008		8/12/2008				8/12/2008		8/12/2008	
Time Sampled :										
%Moisture :	10		16		16		2		13	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	UJ
Tetrachloroethene	4.6	U	5.2	U	5.0	U	4.7	U	4.6	UJ
2-Hexanone	9.1	U	10	U	10	U	9.4	U	9.3	U
Dibromochloromethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
1,2-Dibromoethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Chlorobenzene	4.6	UJ	5.2	U	5.0	U	4.7	U	4.6	UJ
Ethylbenzene	4.6	U	5.2	U	5.0	U	4.7	U	4.6	UJ
o-Xylene	4.6	U	0.34	J	5.0	U	4.7	U	4.6	UJ
m,p-Xylene	4.6	U	1.4	J	5.0	U	0.42	J	0.29	J
Styrene	4.6	U	5.2	U	5.0	U	4.7	U	4.6	UJ
Bromoform	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
Isopropylbenzene	4.6	U	5.2	U	5.0	U	4.7	U	4.6	UJ
1,1,2,2-Tetrachloroethane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
1,3-Dichlorobenzene	4.6	UJ	5.2	U	5.0	U	4.7	U	4.6	UJ
1,4-Dichlorobenzene	4.6	UJ	5.2	U	5.0	U	4.7	U	4.6	UJ
1,2-Dichlorobenzene	4.6	UJ	5.2	U	5.0	U	4.7	U	4.6	UJ
1,2-Dibromo-3-chloropropane	4.6	U	5.2	U	5.0	U	4.7	U	4.6	U
1,2,4-Trichlorobenzene	4.6	UJ	5.2	U	5.0	U	4.7	U	4.6	UJ
1,2,3-Trichlorobenzene	4.6	UJ	5.2	U	5.0	U	4.7	U	4.6	UJ

Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QL0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	E2QL6		E2QL8		E2QM2		E2QM3		E2QM5	
Sampling Location :	SS5		SS14		SS6		SS7		SS8	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	8/12/2008		8/12/2008		8/13/2008		8/13/2008		8/13/2008	
Time Sampled :										
%Moisture :	17		21		17		17		9	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Chloromethane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Vinyl chloride	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Bromomethane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Chloroethane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Trichlorofluoromethane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
1,1-Dichloroethene	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
1,1,2-Trichloro-1,2,2-trifluoro	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Acetone	11	U	14	U	7.8	J	44		8.6	U
Carbon Disulfide	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Methyl acetate	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Methylene chloride	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
trans-1,2-Dichloroethene	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Methyl tert-butyl ether	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
1,1-Dichloroethane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
cis-1,2-Dichloroethene	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
2-Butanone	11	U	14	U	12	U	11	U	8.6	U
Bromochloromethane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Chloroform	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
1,1,1-Trichloroethane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Cyclohexane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Carbon tetrachloride	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Benzene	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
1,2-Dichloroethane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
1,4-Dioxane	110	R	140	R	120	R	110	R	86	R
Trichloroethene	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Methylcyclohexane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
1,2-Dichloropropane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Bromodichloromethane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
cis-1,3-Dichloropropene	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
4-Methyl-2-pentanone	11	U	14	U	12	U	11	U	8.6	U
Toluene	1.5	J	1.4	J	6.0	U	5.7	U	4.3	U
trans-1,3-Dichloropropene	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U

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Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QL0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	E2QL6		E2QL8		E2QM2		E2QM3		E2QM5	
Sampling Location :	SS5		SS14		SS6		SS7		SS8	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	8/12/2008		8/12/2008		8/13/2008		8/13/2008		8/13/2008	
Time Sampled :										
%Moisture :	17		21		17		17		9	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Tetrachloroethene	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
2-Hexanone	11	U	14	U	12	U	11	U	8.6	U
Dibromochloromethane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
1,2-Dibromoethane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Chlorobenzene	5.4	U	7.1	UJ	6.0	U	5.7	UJ	4.3	U
Ethylbenzene	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
o-Xylene	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
m,p-Xylene	0.39	J	7.1	U	6.0	U	5.7	U	4.3	U
Styrene	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Bromoform	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
Isopropylbenzene	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
1,1,2,2-Tetrachloroethane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
1,3-Dichlorobenzene	5.4	U	7.1	UJ	6.0	U	5.7	UJ	4.3	U
1,4-Dichlorobenzene	5.4	U	7.1	UJ	6.0	U	5.7	UJ	4.3	U
1,2-Dichlorobenzene	5.4	U	7.1	UJ	6.0	U	5.7	UJ	4.3	U
1,2-Dibromo-3-chloropropane	5.4	U	7.1	U	6.0	U	5.7	U	4.3	U
1,2,4-Trichlorobenzene	5.4	U	7.1	UJ	6.0	U	5.7	UJ	4.3	U
1,2,3-Trichlorobenzene	5.4	U	7.1	UJ	6.0	U	5.7	UJ	4.3	U

Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QL0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	E2QM6		E2QN1		E2QN1MS		E2QN1MSD		E2QN3	
Sampling Location :	SS9		SS10		SS10		SS10		SS11	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	8/13/2008		8/13/2008						8/13/2008	
Time Sampled :										
%Moisture :	9		17		17		17		11	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	6.0	U	5.6	U	5.8	U	0.39	J	4.4	U
Chloromethane	6.0	U	5.6	U	5.8	U	6.4	U	4.4	U
Vinyl chloride	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
Bromomethane	6.0	U	5.6	U	5.8	U	6.4	U	4.4	U
Chloroethane	6.0	U	5.6	U	5.8	U	6.4	U	4.4	U
Trichlorofluoromethane	6.0	U	5.6	U	5.8	UJ	0.64	J	4.4	U
1,1-Dichloroethene	6.0	U	5.6	U	30	J	67	J	4.4	U
1,1,2-Trichloro-1,2,2-trifluoro	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
Acetone	12	U	11	U	12	U	13	U	6.5	J
Carbon Disulfide	6.0	U	5.6	U	5.8	U	6.4	U	4.4	U
Methyl acetate	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
Methylene chloride	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
trans-1,2-Dichloroethene	6.0	U	5.6	U	5.8	U	6.4	U	4.4	U
Methyl tert-butyl ether	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
1,1-Dichloroethane	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
cis-1,2-Dichloroethene	6.0	U	5.6	U	5.8	U	6.4	U	4.4	U
2-Butanone	12	U	11	U	12	U	13	U	8.9	U
Bromochloromethane	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
Chloroform	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
1,1,1-Trichloroethane	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
Cyclohexane	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
Carbon tetrachloride	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
Benzene	6.0	U	5.6	U	28	J	65	J	4.4	U
1,2-Dichloroethane	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
1,4-Dioxane	120	R	110	R	120	R	130	R	89	R
Trichloroethene	6.0	U	5.6	U	28	J	69	J	4.4	U
Methylcyclohexane	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
1,2-Dichloropropane	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
Bromodichloromethane	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
cis-1,3-Dichloropropene	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
4-Methyl-2-pentanone	12	U	11	U	12	U	13	U	8.9	U
Toluene	6.0	U	5.6	U	28	J	69	J	4.4	U
trans-1,3-Dichloropropene	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U

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Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QL0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	E2QM6		E2QN1		E2QN1MS		E2QN1MSD		E2QN3	
Sampling Location :	SS9		SS10		SS10		SS10		SS11	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	8/13/2008		8/13/2008						8/13/2008	
Time Sampled :										
%Moisture :	9		17		17		17		11	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
Tetrachloroethene	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
2-Hexanone	12	U	11	U	12	U	13	U	8.9	U
Dibromochloromethane	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
1,2-Dibromoethane	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
Chlorobenzene	6.0	U	5.6	U	27	J	67	J	4.4	U
Ethylbenzene	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
o-Xylene	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
m,p-Xylene	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
Styrene	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
Bromoform	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
Isopropylbenzene	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
1,1,2,2-Tetrachloroethane	6.0	U	5.6	U	5.8	U	6.4	U	4.4	U
1,3-Dichlorobenzene	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
1,4-Dichlorobenzene	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
1,2-Dichlorobenzene	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
1,2-Dibromo-3-chloropropane	6.0	U	5.6	U	5.8	U	6.4	U	4.4	U
1,2,4-Trichlorobenzene	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U
1,2,3-Trichlorobenzene	6.0	U	5.6	U	5.8	UJ	6.4	U	4.4	U

Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QL0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

iewer :

Date :

Sample Number :	VBLKAD		VBLKAJ		VBLKFY		VBLKGH		VHBLKYA	
Sampling Location :										
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :										
Time Sampled :										
%Moisture :	0		0		0		0		0	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Chloromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Vinyl chloride	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromomethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Chloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Trichlorofluoromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1-Dichloroethene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone	10	U	10	U	10	U	10	U	10	U
Carbon Disulfide	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Methyl acetate	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Methylene chloride	5.0	U	0.93	J	0.52	J	5.0	U	1.0	J
trans-1,2-Dichloroethene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Methyl tert-butyl ether	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1-Dichloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
cis-1,2-Dichloroethene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2-Butanone	10	U	10	U	10	U	10	U	10	U
Bromochloromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Chloroform	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1,1-Trichloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Cyclohexane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Carbon tetrachloride	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Benzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dichloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,4-Dioxane	100	R	100	R	100	R	100	R	100	R
Trichloroethene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Methylcyclohexane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dichloropropane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromodichloromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
cis-1,3-Dichloropropene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Methyl-2-pentanone	10	U	10	U	10	U	10	U	10	U
Toluene	5.0	U	5.0	U	5.0	U	0.80	J	5.0	U
trans-1,3-Dichloropropene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U

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Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QL0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	VBLKAD		VBLKAJ		VBLKFY		VBLKGH		VHBLKYA	
Sampling Location :										
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :										
Time Sampled :										
%Moisture :	0		0		0		0		0	
pH :										
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
1,1,2-Trichloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Tetrachloroethene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
2-Hexanone	10	U	10	U	10	U	10	U	10	U
Dibromochloromethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2-Dibromoethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Chlorobenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Ethylbenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
o-Xylene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
m,p-Xylene	5.0	U	5.0	U	5.0	U	0.34	J	5.0	U
Styrene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromoform	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Isopropylbenzene	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,1,2,2-Tetrachloroethane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,3-Dichlorobenzene	5.0	U	0.39	J	5.0	U	0.44	J	5.0	U
1,4-Dichlorobenzene	5.0	U	0.43	J	5.0	U	0.54	J	5.0	U
1,2-Dichlorobenzene	5.0	U	0.36	J	5.0	U	0.47	J	5.0	U
1,2-Dibromo-3-chloropropane	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
1,2,4-Trichlorobenzene	0.46	J	0.75	J	5.0	U	1.2	J	5.0	U
1,2,3-Trichlorobenzene	0.65	J	0.83	J	5.0	U	1.2	J	5.0	U

Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QK0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Number of Soil Samples : 0

Number of Water Samples : 22

Number of Sediment Samples : 0

Date :

Sample Number :	E2QK0		E2QK1		E2QK2		E2QK3		E2QK4	
Sampling Location :	GW1		GW2		GW3		GW4		GW5	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :	8/11/2008		8/11/2008		8/11/2008		8/11/2008		8/11/2008	
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	1.0		1.0		1.0		1.0		1.0	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Trace Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.24	J
Vinyl chloride	0.50	U	0.50	U	0.50	U	0.50	U	0.50	UJ
Bromomethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Trichlorofluoromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1-Dichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	UJ
1,1,2-Trichloro-1,2,2-trifluoro	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Acetone	5.0	U	5.0	U	5.0	U	5.0	U	6.3	
Carbon Disulfide	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methyl acetate	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
trans-1,2-Dichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	UJ
Methyl tert-butyl ether	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1-Dichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
cis-1,2-Dichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	UJ
2-Butanone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromochloromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	0.50	U	0.50	U	0.50	U	0.50	U	0.80	
1,1,1-Trichloroethane	0.15	J	0.15	J	0.18	J	0.50	U	0.50	U
Cyclohexane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon tetrachloride	0.50	U	0.50	U	0.50	U	0.50	U	0.17	J
Benzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Trichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylcyclohexane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dichloropropane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Bromodichloromethane	0.50	U	0.50	U	0.23	J	0.50	U	0.58	
cis-1,3-Dichloropropene	0.50	U	0.50	U	0.50	UJ	0.50	U	0.50	UJ
4-Methyl-2-pentanone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Toluene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
trans-1,3-Dichloropropene	0.50	U	0.50	U	0.50	UJ	0.50	U	0.50	UJ
1,1,2-Trichloroethane	0.50	U	0.50	U	0.50	UJ	0.50	U	0.50	UJ

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Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QK0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	E2QK0	E2QK1	E2QK2	E2QK3	E2QK4					
Sampling Location :	GW1	GW2	GW3	GW4	GW5					
Matrix :	Water	Water	Water	Water	Water					
Units :	ug/L	ug/L	ug/L	ug/L	ug/L					
Date Sampled :	8/11/2008	8/11/2008	8/11/2008	8/11/2008	8/11/2008					
Time Sampled :										
%Moisture :	N/A	N/A	N/A	N/A	N/A					
pH :	1.0	1.0	1.0	1.0	1.0					
Dilution Factor :	1.0	1.0	1.0	1.0	1.0					
Trace Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Tetrachloroethene	1.2		1.2		1.6		1.7		2.0	
2-Hexanone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Dibromochloromethane	0.50	U	0.50	U	0.16	J	0.50	U	0.34	J
1,2-Dibromoethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Ethylbenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
o-Xylene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
m,p-Xylene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Styrene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Bromoform	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Isopropylbenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1,2,2-Tetrachloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,3-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,4-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dibromo-3-chloropropane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2,4-Trichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2,3-Trichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U

Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QK0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	E2QK5	E2QK6	E2QK6MS	E2QK6MSD	E2QK7					
Sampling Location :	GW6	GW7	GW7	GW7	GW8					
Matrix :	Water	Water	Water	Water	Water					
Units :	ug/L	ug/L	ug/L	ug/L	ug/L					
Date Sampled :	8/11/2008	8/11/2008			8/11/2008					
Time Sampled :										
%Moisture :	N/A	N/A	0	0	N/A					
pH :	1.0	1.0	1.0	1.0	1.0					
Dilution Factor :	1.0	1.0	1.0	1.0	1.0					
Trace Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.18	J
Vinyl chloride	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Bromomethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Trichlorofluoromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1-Dichloroethene	0.50	U	0.13	J	5.7		5.6		0.50	U
1,1,2-Trichloro-1,2,2-trifluoro	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Acetone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Carbon Disulfide	0.50	U	0.50	U	0.50	U	0.50	U	0.14	J
Methyl acetate	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
trans-1,2-Dichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methyl tert-butyl ether	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1-Dichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
cis-1,2-Dichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
2-Butanone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromochloromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1,1-Trichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Cyclohexane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon tetrachloride	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Benzene	0.50	U	0.50	U	5.7		5.5		0.50	U
1,2-Dichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Trichloroethene	0.50	U	0.50	U	5.2		5.2		0.50	U
Methylcyclohexane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dichloropropane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Bromodichloromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
cis-1,3-Dichloropropene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
4-Methyl-2-pentanone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Toluene	0.50	U	0.50	U	6.0		5.9		0.50	U
trans-1,3-Dichloropropene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1,2-Trichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U

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Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QK0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	E2QK5	E2QK6	E2QK6MS	E2QK6MSD	E2QK7					
Sampling Location :	GW6	GW7	GW7	GW7	GW8					
Matrix :	Water	Water	Water	Water	Water					
Units :	ug/L	ug/L	ug/L	ug/L	ug/L					
Date Sampled :	8/11/2008	8/11/2008			8/11/2008					
Time Sampled :										
%Moisture :	N/A	N/A	0	0	N/A					
pH :	1.0	1.0	1.0	1.0	1.0					
Dilution Factor :	1.0	1.0	1.0	1.0	1.0					
Trace Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Tetrachloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
2-Hexanone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Dibromochloromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dibromoethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chlorobenzene	0.50	U	0.50	U	5.4	U	5.4	U	0.50	U
Ethylbenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
o-Xylene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
m,p-Xylene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Styrene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Bromoform	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Isopropylbenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1,2,2-Tetrachloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,3-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,4-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dibromo-3-chloropropane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2,4-Trichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2,3-Trichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U

Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QK0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Purveyor :

Date :

Sample Number :	E2QL1		E2QL4		E2QL7		E2QL9		E2QM0	
Sampling Location :	GW9		GW11		GW10		GW12		GW13	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :	8/11/2008		8/12/2008		8/12/2008		8/12/2008		8/12/2008	
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	1.0		1.0		1.0		1.0		1.0	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Trace Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloromethane	0.50	U	0.50	U	0.12	J	0.11	J	0.50	U
Vinyl chloride	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Bromomethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Trichlorofluoromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1-Dichloroethene	0.50	U	0.50	U	0.50	U	0.50	UJ	0.50	U
1,1,2-Trichloro-1,2,2-trifluoro	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Acetone	5.0	U	5.0	U	3.7	J	5.0	U	5.0	U
Carbon Disulfide	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methyl acetate	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1-Dichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
trans-1,2-Dichloroethene	0.50	U	0.50	U	0.50	U	0.50	UJ	0.50	U
Methyl tert-butyl ether	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1-Dichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
cis-1,2-Dichloroethene	0.50	U	0.50	U	0.50	U	0.50	UJ	0.50	U
2-Butanone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromochloromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1,1-Trichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Cyclohexane	0.50	UJ	0.50	UJ	0.21	J	0.30	J	0.28	J
Carbon tetrachloride	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Benzene	0.50	U	0.50	U	0.36	J	0.20	J	0.19	J
1,2-Dichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Trichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylcyclohexane	0.50	UJ	0.50	UJ	0.32	J	0.31	J	0.30	J
1,2-Dichloropropane	0.50	UJ	0.50	UJ	0.50	UJ	0.50	UJ	0.50	UJ
Bromodichloromethane	0.50	UJ	0.50	UJ	0.50	UJ	0.50	UJ	0.50	UJ
cis-1,3-Dichloropropene	0.50	UJ	0.50	U	0.50	UJ	0.50	UJ	0.50	UJ
4-Methyl-2-pentanone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Toluene	0.17	J	0.12	J	0.88		0.31	J	0.28	J
trans-1,3-Dichloropropene	0.50	UJ	0.50	U	0.50	UJ	0.50	UJ	0.50	UJ
1,1,2-Trichloroethane	0.50	UJ	0.50	U	0.50	UJ	0.50	UJ	0.50	UJ

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Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QK0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	E2QL1		E2QL4		E2QL7		E2QL9		E2QM0	
Sampling Location :	GW9		GW11		GW10		GW12		GW13	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :	8/11/2008		8/12/2008		8/12/2008		8/12/2008		8/12/2008	
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	1.0		1.0		1.0		1.0		1.0	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Trace Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Tetrachloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
2-Hexanone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Dibromochloromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dibromoethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Ethylbenzene	0.50	U	0.50	U	0.19	J	0.50	U	0.50	U
o-Xylene	0.50	U	0.50	U	0.13	J	0.50	U	0.50	U
m,p-Xylene	0.50	U	0.50	U	0.31	J	0.11	J	0.11	J
Styrene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Bromoform	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Isopropylbenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1,2,2-Tetrachloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,3-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,4-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dibromo-3-chloropropane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2,4-Trichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2,3-Trichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U

Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QK0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	E2QM1		E2QM4		E2QM7		E2QM8		E2QM9	
Sampling Location :	GW14		GW15		GW17		GW18		GW19	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :	8/11/2008		8/13/2008		8/13/2008		8/13/2008		8/13/2008	
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	1.0		1.0		1.0		1.0		1.0	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Trace Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloromethane	0.50	U	0.50	U	0.50	U	0.14	J	0.50	U
Vinyl chloride	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Bromomethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Trichlorofluoromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1-Dichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1,2-Trichloro-1,2,2-trifluoro	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Acetone	5.0	U	2.7	J	5.0	U	5.0	U	2.7	J
Carbon Disulfide	0.50	U	0.50	U	0.14	J	0.16	J	0.46	J
Methyl acetate	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
trans-1,2-Dichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methyl tert-butyl ether	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1-Dichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
cis-1,2-Dichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
2-Butanone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromochloromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1,1-Trichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Cyclohexane	0.50	UJ	0.50	U	0.50	U	0.50	U	0.50	UJ
Carbon tetrachloride	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Benzene	0.50	U	0.35	J	0.50	U	0.50	U	0.22	J
1,2-Dichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Trichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylcyclohexane	0.50	UJ	0.10	J	0.50	U	0.50	U	0.14	J
1,2-Dichloropropane	0.50	UJ	0.50	U	0.50	U	0.50	U	0.50	UJ
Bromodichloromethane	0.50	UJ	0.50	U	0.50	U	0.50	U	0.50	UJ
cis-1,3-Dichloropropene	0.50	UJ	0.50	U	0.50	UJ	0.50	UJ	0.50	UJ
4-Methyl-2-pentanone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Toluene	0.50	U	0.53		0.14	J	0.14	J	0.39	J
trans-1,3-Dichloropropene	0.50	UJ	0.50	U	0.50	UJ	0.50	UJ	0.50	UJ
1,1,2-Trichloroethane	0.50	UJ	0.50	U	0.50	UJ	0.50	UJ	0.50	UJ

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Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QK0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	E2QM1		E2QM4		E2QM7		E2QM8		E2QM9	
Sampling Location :	GW14		GW15		GW17		GW18		GW19	
Matrix :	Water		Water		Water		Water		Water	
Units :	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :	8/11/2008		8/13/2008		8/13/2008		8/13/2008		8/13/2008	
Time Sampled :										
%Moisture :	N/A		N/A		N/A		N/A		N/A	
pH :	1.0		1.0		1.0		1.0		1.0	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Trace Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Tetrachloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
2-Hexanone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Dibromochloromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dibromoethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Ethylbenzene	0.50	U	0.15	J	0.50	U	0.50	U	0.50	U
o-Xylene	0.50	U	0.16	J	0.50	U	0.12	J	0.50	U
m,p-Xylene	0.50	U	0.43	J	0.31	J	0.34	J	0.16	J
Styrene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Bromoform	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Isopropylbenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1,2,2-Tetrachloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,3-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,4-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dibromo-3-chloropropane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2,4-Trichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2,3-Trichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U

Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QK0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	E2QN0	E2QN2	E2QN4	E2QN5	VBLKAV					
Sampling Location :	GW16	GW20	GW22	GW21						
Matrix :	Water	Water	Water	Water	Water					
Units :	ug/L	ug/L	ug/L	ug/L	ug/L					
Date Sampled :	8/11/2008	8/13/2008	8/13/2008	8/13/2008						
Time Sampled :										
%Moisture :	N/A	N/A	N/A	N/A	0					
pH :	1.0	1.0	1.0	1.0						
Dilution Factor :	1.0	1.0	1.0	1.0	1.0					
Trace Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloromethane	0.10	J	0.50	U	0.50	U	0.50	U	0.50	U
Vinyl chloride	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Bromomethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Trichlorofluoromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1-Dichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1,2-Trichloro-1,2,2-trifluor	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Acetone	5.0	U	5.0	U	3.0	J	3.2	J	5.0	U
Carbon Disulfide	0.50	U	0.50	U	0.23	J	0.10	J	0.50	U
Methyl acetate	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylene chloride	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
trans-1,2-Dichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methyl tert-butyl ether	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1-Dichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
cis-1,2-Dichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
2-Butanone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Bromochloromethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chloroform	0.50	U	0.50	U	5.0		4.7		0.50	U
1,1,1-Trichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Cyclohexane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Carbon tetrachloride	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Benzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Trichloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Methylcyclohexane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dichloropropane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Bromodichloromethane	0.50	U	0.50	U	2.0		2.0		0.50	U
cis-1,3-Dichloropropene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
4-Methyl-2-pentanone	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Toluene	0.50	U	0.50	U	0.13	J	0.10	J	0.50	U
trans-1,3-Dichloropropene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1,2-Trichloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U

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Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QK0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	E2QN0	E2QN2	E2QN4	E2QN5	VBLKAV					
Sampling Location :	GW16	GW20	GW22	GW21						
Matrix :	Water	Water	Water	Water	Water					
Units :	ug/L	ug/L	ug/L	ug/L	ug/L					
Date Sampled :	8/11/2008	8/13/2008	8/13/2008	8/13/2008						
Time Sampled :										
%Moisture :	N/A	N/A	N/A	N/A	0					
pH :	1.0	1.0	1.0	1.0						
Dilution Factor :	1.0	1.0	1.0	1.0	1.0					
Trace Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Tetrachloroethene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
2-Hexanone	5.0	U	5.0	U	5.0	U	5.0	U	2.7	J
Dibromochloromethane	0.50	U	0.50	U	0.86		0.89		0.50	U
1,2-Dibromoethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Chlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Ethylbenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
o-Xylene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
m,p-Xylene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Styrene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
Bromoform	0.50	U	0.50	U	0.35	J	0.28	J	0.50	U
Isopropylbenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,1,2,2-Tetrachloroethane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,3-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,4-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2-Dibromo-3-chloropropane	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2,4-Trichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U
1,2,3-Trichlorobenzene	0.50	U	0.50	U	0.50	U	0.50	U	0.50	U

Case #: 37767

SDG : E2QK0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	VBLKHJ	VHBLKZZ								
Sampling Location :										
Matrix :	Water	Water								
Units :	ug/L	ug/L								
Date Sampled :										
Time Sampled :										
%Moisture :	0	N/A								
pH :		1.0								
Dilution Factor :	1.0	1.0								
Trace Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	0.50	U	0.50	U						
Chloromethane	0.50	U	0.50	U						
Vinyl chloride	0.50	U	0.50	U						
Bromomethane	0.50	U	0.50	U						
Chloroethane	0.50	U	0.50	U						
Trichlorofluoromethane	0.50	U	0.50	U						
1,1-Dichloroethene	0.50	U	0.50	U						
1,1,2-Trichloro-1,2,2-trifluoro	0.50	U	0.50	U						
Acetone	5.0	U	5.0	U						
Carbon Disulfide	0.50	U	0.50	U						
Methyl acetate	0.50	U	0.50	U						
Methylene chloride	0.17	J	0.27	J						
trans-1,2-Dichloroethene	0.50	U	0.50	U						
Methyl tert-butyl ether	0.50	U	0.50	U						
1,1-Dichloroethane	0.50	U	0.50	U						
cis-1,2-Dichloroethene	0.50	U	0.50	U						
2-Butanone	5.0	U	5.0	U						
Bromochloromethane	0.50	U	0.50	U						
Chloroform	0.50	U	0.50	U						
1,1,1-Trichloroethane	0.50	U	0.50	U						
Cyclohexane	0.50	U	0.50	U						
Carbon tetrachloride	0.50	U	0.50	U						
Benzene	0.50	U	0.50	U						
1,2-Dichloroethane	0.50	U	0.50	U						
Trichloroethene	0.50	U	0.50	U						
Methylcyclohexane	0.50	U	0.50	U						
1,2-Dichloropropane	0.50	U	0.50	U						
Bromodichloromethane	0.50	U	0.50	U						
cis-1,3-Dichloropropene	0.50	U	0.50	U						
4-Methyl-2-pentanone	5.0	U	5.0	U						
Toluene	0.50	U	0.50	U						
trans-1,3-Dichloropropene	0.50	U	0.50	U						
1,1,2-Trichloroethane	0.50	U	0.50	U						

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Analytical Results (Qualified Data)

Page ____ of ____

Case #: 37767

SDG : E2QK0

Site :

LOGANSPORT WELLFIELD

Lab. :

LIBRTY

Reviewer :

Date :

Sample Number :	VBLKHJ	VHBLKZZ								
Sampling Location :										
Matrix :	Water	Water								
Units :	ug/L	ug/L								
Date Sampled :										
Time Sampled :										
%Moisture :	0	N/A								
pH :		1.0								
Dilution Factor :	1.0	1.0								
Trace Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Tetrachloroethene	0.50	U	0.50	U						
2-Hexanone	1.4	J	5.0	U						
Dibromochloromethane	0.50	U	0.50	U						
1,2-Dibromoethane	0.50	U	0.50	U						
Chlorobenzene	0.50	U	0.50	U						
Ethylbenzene	0.50	U	0.50	U						
o-Xylene	0.50	U	0.50	U						
m,p-Xylene	0.50	U	0.50	U						
Styrene	0.50	U	0.50	U						
Bromoform	0.50	U	0.50	U						
Isopropylbenzene	0.50	U	0.50	U						
1,1,2,2-Tetrachloroethane	0.50	U	0.50	U						
1,3-Dichlorobenzene	0.50	U	0.50	U						
1,4-Dichlorobenzene	0.50	U	0.50	U						
1,2-Dichlorobenzene	0.50	U	0.50	U						
1,2-Dibromo-3-chloropropane	0.50	U	0.50	U						
1,2,4-Trichlorobenzene	0.50	U	0.50	U						
1,2,3-Trichlorobenzene	0.50	U	0.50	U						

Appendix E

Record of Logansport Municipal Water Wells

#103834 – Well #2

#103839 – Well #3

#103824 – Well #4

#103829 – Well #5 (previously called Well #7)

#103814 – Well #6

Record of Water Well

Indiana Department of Natural Resources

Reference Number 103814	Driving directions to well 250' S OF RIVER RD, 825' W OF W ENTRANCE TO STATE HOSPITAL		Date completed Jul 15, 1968	
Owner-Contractor Owner Driller Operator	Name CITY OF LOGANSPO LAYNE NORTHERN CO. PAUL WYATT	Address MISHAWAKA, IN License: null	Telephone	
Construction Details	Use: PS	Drilling method: Other	Pump type:	
Well	Depth: 81.0	Pump setting depth:	Water quality:	
Casing	Length: 60.0	Material:	Diameter: 36.0	
Screen	Length: 20.0	Material:	Diameter: 12.0 Slot size: #35 SS	
Well Capacity Test	Type of test:	Test rate: 900.0 gpm for 2.0 hrs.	BailTest rate: gpm for hrs.	
	Drawdown: 10.0 ft.	Static water level: 16.0 ft.	Bailer Drawdown: ft.	
Grouting Information	Material:	Depth: from to		
	Installation Method:	Number of bags used:		
Well Abandonment	Sealing material:	Depth: from to		
	Installation Method:	Number of bags used:		
Administrative	County: Cass	Township: 27N Range: 1E		
	Section: NE of the SW of the NW of Section 34	Topo map: Clymers		
	Grant Number:			
	Field located by: WG	on: Sep 09, 1976		
	Courthouse location by:	on:		
	Location accepted w/o verification by:	on:		
	Subdivision name:	Lot number:		
	Ft W of EL:	Ft N of SL: 3600.0	Ft E of WL: 1000.0	Ft S of NL:
	Ground elevation: 590.0	Depth to bedrock:	Bedrock elevation:	Aquifer elevation: 508.0
	UTM Easting: 550060.0	UTM Northing: 4510500.0		
Well Log	Top	Bottom	Formation	
	0.0	1.0	TOP SOIL	
	1.0	36.0	BOULDERS	
	36.0	37.0	CLAY	
	37.0	57.0	FINE SAND	
	57.0	60.0	CLAY	
	60.0	82.0	CRS GRAV	
	82.0	0.0	LIMESTONE	
Comments	MC WELL #6 VERIFIED BY CITY WATER DEPT.			

Record of Water Well

Indiana Department of Natural Resources

Reference Number 103829	Driving directions to well 200' S OF RIVER RD, 300' W OF W ENTRANCE TO STATE HOSPITAL		Date completed Nov 08, 1968	
Owner-Contractor Owner Driller Operator	Name CITY OF LOGANSPO LAYNE NORTHERN CO. PAUL WYATT	Address MISHAWAKA, IN License: null	Telephone	
Construction Details				
Well	Use: PS	Drilling method: Other	Pump type:	
	Depth: 80.0	Pump setting depth:	Water quality:	
Casing	Length: 61.0	Material:	Diameter: 36.0	
Screen	Length: 20.0	Material:	Diameter: 12.0 Slot size: 35 SS	
Well Capacity Test	Type of test:	Test rate: 800.0 gpm for 8.0 hrs.	Bail Test rate: gpm for hrs.	
	Drawdown: 3.0 ft.	Static water level: 18.0 ft.	Bailer Drawdown: ft.	
Grouting Information	Material:	Depth: from to		
	Installation Method:	Number of bags used:		
Well Abandonment	Sealing material:	Depth: from to		
	Installation Method:	Number of bags used:		
Administrative	County: Cass		Township: 27N Range: 1E	
	Section: NW of the SE of the NW of Section 34		Topo map: Clymers	
	Grant Number:			
	Field located by: WG	on: Jul 09, 1976		
	Courthouse location by:	on:		
	Location accepted w/o verification by:	on:		
	Subdivision name:	Lot number:		
	Ft W of EL:	Ft N of SL: 3600.0	Ft E of WL: 1700.0	Ft S of NL:
	Ground elevation: 591.0	Depth to bedrock:	Bedrock elevation:	Aquifer elevation: 511.0
	UTM Easting: 550260.0	UTM Northing: 4510505.0		
Well Log	Top	Bottom	Formation	
	0.0	1.0	TOP SOIL	
	1.0	18.0	GRAVELY CLAY	
	18.0	40.0	BOULDERS	
	40.0	80.0	CRS GRAV - BOULDERS	
	80.0	0.0	CRS GRAV	
Comments	MC VERIFIED BY DEPT. OF WATER WELL #7			

Record of Water Well

Indiana Department of Natural Resources

Reference Number 103824	Driving directions to well 30' N OF OLD #4 WELL, 210' S OF RIVER RD & 20' W OF W CATE RD		Date completed Jan 08, 1986	
Owner-Contractor Owner Driller Operator	Name CITY OF LOGANSPO PEERLESS-MIDWEST, INC. J. BLATZ	Address LOGANSPO, IN 51255 BITTERSWEET RD, GRANGER IN License: null	Telephone	
Construction Details				
Well	Use: PS	Drilling method: Cable Tool	Pump type:	
	Depth: 88.0	Pump setting depth:	Water quality:	
Casing	Length: 65.0	Material:	Diameter: 12.0	
Screen	Length: 20.0	Material:	Diameter: 12.0 Slot size: .050	
Well Capacity Test	Type of test:	Test rate: 1400.0 gpm for 8.0 hrs.	BailTest rate: gpm for hrs.	
	Drawdown: 13.0 ft.	Static water level: 17.0 ft.	Bailer Drawdown: ft.	
Grouting Information	Material:	Depth: from to		
	Installation Method:	Number of bags used:		
Well Abandonment	Sealing material:	Depth: from to		
	Installation Method:	Number of bags used:		
Administrative	County: Cass	Township: 27N Range: 1E		Topo map: Clymers
	Section: NW of the SE of the NW of Section 34			
	Grant Number:			
	Field located by: KM	on: Sep 02, 1986		
	Courthouse location by:	on:		
	Location accepted w/o verification by:	on:		
	Subdivision name:	Lot number:		
	Ft W of EL:	Ft N of SL: 3650.0	Ft E of WL: 1950.0	Ft S of NL:
	Ground elevation: 588.0	Depth to bedrock: 89.0	Bedrock elevation: 499.0	Aquifer elevation:
	UTM Easting: 550350.0	UTM Northing: 4510550.0		
Well Log	Top	Bottom	Formation	
	0.0	29.0	BOULDERS, GRAV & SAND	
	29.0	44.0	BOULDERS, SAND & GRAY CLAY	
	44.0	47.0	GRAY MUDDY FINE SAND	
	47.0	50.0	CLAY	
	50.0	53.0	MED-CRS S & G	
	53.0	58.0	CRS SAND MED GRAV & CLAY	
	58.0	61.0	S & G WITH BOULDERS	
	61.0	67.0	SAND, GRAV & CLAY	
	67.0	89.0	CRS S & G	
	89.0	0.0	LIMESTONE	
Comments	MC VER. BY MAN AT SEWAGE DEPT. TYPE OF WELL: TUBULAR			

Record of Water Well

Indiana Department of Natural Resources

Reference Number 103839	Driving directions to well 1250' W OF LOGANSPOBT BYPASS, 200' S OF RIVER RD	Date completed Jan 24, 1991
Owner-Contractor Name	Address	Telephone
Owner LOGANSPOBT MUNICIPAL UTILITIES	SIXTH & BROADWAY, LOGANSPOBT, IN	(219) 272-9050
Driller PEERLESS-MIDWEST, INC.	PO BOX 26, GRANGER IN	
Operator FINDLAY DRILLING (SUBCONTRACTOR)	License: 243	
Construction Details		
Well	Use: TEST Depth: 70.0	Drilling method: Rotary Pump setting depth:
Casing	Length:	Material:
Screen	Length:	Material:
Well Capacity Test	Type of test: Drawdown: ft.	Test rate: gpm for hrs. Static water level: ft.
Grouting Information	Material: Installation Method:	Pump type: Water quality: Diameter: Diameter: Slot size:
Well Abandonment	Sealing material: Installation Method:	Depth: from to Number of bags used:
Administrative	County: Cass Section: NW of the SE of the NW of Section 34 Grant Number: Field located by: Courthouse location by: Location accepted w/o verification by: Subdivision name: Ft W of EL: Ground elevation: 592.0 UTM Easting: 550340.0	Township: 27N Range: 1E Topo map: Clymers on: on: on: Lot number: Ft E of WL: 1900.0 Bedrock elevation: 524.0 UTM Northing: 4510475.0 Ft S of NL: Aquifer elevation:
Well Log	Top Bottom Formation	
	0.0 5.0 TOP SOIL	
	5.0 11.0 BOULDERS & GRAV	
	11.0 20.0 MED GRAV TRACE CLAY @13'	
	20.0 30.0 VERY CRS SAND & FN -MED GRAV	
	30.0 35.0 CRS SAND & FN GRAV CLAY @33'	
	35.0 55.0 VERY CRS SAND - FN GRAV BOULDR	
	55.0 68.0 FINE- MED GRAV, BOULDERS	
	68.0 70.0 LIMESTONE BEDROCK	
Comments	TW 91A	

Record of Water Well

Indiana Department of Natural Resources

Reference Number		Driving directions to well		Date completed	
103834		145' S OF RIVER RD & 1240' W OF LOGANSPOBT BYPASS, 10' FROM TW 91A, 242' E OF WELL #3 & 40' W OF OLD WELL #2		Feb 22, 1991	
Owner-Contractor		Name	Address	Telephone	
Owner		CITY OF LOGANSPOBT	CITY HALL, LOGANSPOBT, IN		
Driller		PEERLESS-MIDWEST, INC.	51255 BITTERSWEET RD, GRANGER, IN	(219) 272-9050	
Operator		JOHN BLATZ	License: 214		
Construction Details					
Well	Use: PS	Drilling method: Cable Tool	Pump type:		
	Depth: 69.0	Pump setting depth:	Water quality:		
Casing	Length: 51.0	Material: STEEL	Diameter: 12.0		
Screen	Length: 20.0	Material: SSWW	Diameter: 10.0 Slot size: .060/ .080		
Well Capacity Test		Type of test: PUMPING	Test rate: 1390.0 gpm for hrs.	BailTest rate: gpm for hrs.	
		Drawdown: 26.0 ft.	Static water level: 19.0 ft.	Bailer Drawdown ft.	
Grouting Information		Material: BENTONITE	Depth: from 0.0 to 25.0		
		Installation Method:	Number of bags used:		
Well Abandonment		Sealing material:	Depth: from to		
		Installation Method:	Number of bags used:		
Administrative		County: Cass	Township: 27N Range: 1E		
		Section: NW of the SE of the NW of Section 34		Topo map: Clymers	
		Grant Number:			
		Field located by: SAR	on: Aug 01, 1992		
		Courthouse location by:	on:		
		Location accepted w/o verification by:	on:		
		Subdivision name:	Lot number:		
		Ft W of EL:	Ft N of SL: 3450.0	Ft E of WL: 1800.0	Ft S of NL:
		Ground elevation: 592.0	Depth to bedrock: 69.0	Bedrock elevation: 523.0	Aquifer elevation:
		UTM Easting: 550300.0		UTM Northing: 4510445.0	
Well Log		Top	Bottom	Formation	
		0.0	1.0	TOP SOIL	
		1.0	20.0	BOULDERS & GRAV	
		20.0	69.0	BOULDERS, CRS S & G	
		69.0	0.0	LIMESTONE	
Comments		WELL #2			

Appendix F

Record of Nearby Water Wells

Record of Water Well

Indiana Department of Natural Resources

Reference Number 116550	Driving directions to well WEST OFF INDIANA 25 ON 200 ST. 1ST ROAD SOUTH ON GRAVEL ROAD 1/8 MILE ON EAST SIDE OF RD 26N 1E SEC 3		Date completed Jul 22, 1975	
Owner-Contractor Owner Driller Operator	Name GREG ISAACS MOSS WELL DRILLING, INC DARRELL MOSS	Address R#2 BOX 69A LOGANSPOUT, IND BOX 225 GALVESTON, IND License: null	Telephone	
Construction Details				
Well	Use: HOME	Drilling method: Rotary	Pump type:	
	Depth: 82.0	Pump setting depth:	Water quality:	
Casing	Length: 28.0	Material:	Diameter: 5.0	
Screen	Length:	Material:	Diameter: Slot size:	
Well Capacity Test	Type of test:	Test rate: 50.0 gpm for hrs.	BailTest rate: gpm for hrs.	
	Drawdown: ft.	Static water level: 4.0 ft.	Bailer Drawdown: ft.	
Grouting Information	Material:		Depth: from to	
	Installation Method:		Number of bags used:	
Well Abandonment	Sealing material:		Depth: from to	
	Installation Method:		Number of bags used:	
Administrative	County: Cass		Township: 26N Range: 1E	
	Section: NE of the NE of the NW of Section 3		Topo map: Clymers	
	Grant Number:			
	Field located by: WG		on: Sep 07, 1976	
	Courthouse location by:		on:	
	Location accepted w/o verification by:		on:	
	Subdivision name:		Lot number:	
	Ft W of EL:	Ft N of SL:	Ft E of WL: 2600.0	Ft S of NL: 450.0
	Ground elevation: 652.0	Depth to bedrock: 20.0	Bedrock elevation: 632.0	Aquifer elevation:
	UTM Easting: 550544.0		UTM Northing: 4509281.0	
Well Log	Top	Bottom	Formation	
	0.0	5.0	CLAY	
	5.0	12.0	S&G	
	12.0	13.0	SHEET OF LS	
	13.0	20.0	GRAV	
	20.0	82.0	LS	
Comments	OWNER VERIFIED; MC; WELL LOCATED 25-30 FT WEST OF NW CORNER OF TRAILER.			

Record of Water Well

Indiana Department of Natural Resources

Reference Number 116601	Driving directions to well 175 W. 250 S. ON EAST SIDE		Date completed May 24, 1972	
Owner-Contractor	Name	Address	Telephone	
Owner	DEAN MUSSELMAN	900 STANLEY ST. LOGANSPOUT, IND.		
Driller	MOSS WELL DRILLING INC.	BOX 225 GALVESTON, IND.		
Operator	DARRELL MOSS	License: null		
Construction Details				
Well	Use: HOME	Drilling method: Rotary	Pump type:	
	Depth: 64.0	Pump setting depth:	Water quality:	
Casing	Length: 28.0	Material:	Diameter: 5.56	
Screen	Length:	Material:	Diameter: Slot size:	
Well Capacity Test	Type of test:	Test rate: 60.0 gpm for hrs.	BailTest rate: gpm for hrs.	
	Drawdown: ft.	Static water level: 24.0 ft.	Bailer Drawdown ft.	
Grouting Information				
	Material:	Depth: from to		
	Installation Method:	Number of bags used:		
Well Abandonment				
	Sealing material:	Depth: from to		
	Installation Method:	Number of bags used:		
Administrative				
	County: Cass	Township: 26N Range: 1E		
	Section: SW of the SE of the NW of Section 3	Topo map: Clymers		
	Grant Number:			
	Field located by:	on:		
	Courthouse location by:	on:		
	Location accepted w/o verification by:	on:		
	Subdivision name:	Lot number:		
	Ft W of EL:	Ft N of SL:	Ft E of WL: 2000.0	Ft S of NL: 2300.0
	Ground elevation: 690.0	Depth to bedrock: 25.0	Bedrock elevation: 665.0	Aquifer elevation:
	UTM Easting: 550383.0		UTM Northing: 4508689.0	
Well Log	Top	Bottom	Formation	
	0.0	16.0	CLAY	
	16.0	25.0	S&G	
	25.0	64.0	LS	
Comments	WELL LOCATED IN SMALL WOODEN GRAY BLDG 4X4 60-70 FT NW OF NW CORNER OF TRAILER			

Record of Water Well

Indiana Department of Natural Resources

Reference Number 116555		Driving directions to well 1/4 MILE SOUTH OF STATE ROAD 25 ON 175 W. ON THE EAST SIDE		Date completed Jul 20, 1978	
Owner-Contractor		Name	Address	Telephone	
Owner		BUTCH VAUGHN	LOGANSPOUT, INDIANA		
Driller		ARMSTRONG WELL DRILLING	P.O. BOX 345 BURLINGTON, INDIANA		
Operator		JOE & JOHN ARMSTRONG	License: null		
Construction Details					
Well	Use: HOME	Drilling method: Rotary	Pump type:		
	Depth: 65.0	Pump setting depth:	Water quality:		
Casing	Length: 43.0	Material:	Diameter: 5.0		
Screen	Length:	Material:	Diameter: Slot size:		
Well Capacity Test		Type of test:	Test rate: gpm for hrs.	BailTest rate: 60.0 gpm for 1.0 hrs.	
		Drawdown: ft.	Static water level: 27.5 ft.	Bailer Drawdown ft.	
Grouting Information		Material:	Depth: from to		
		Installation Method:	Number of bags used:		
Well Abandonment		Sealing material:	Depth: from to		
		Installation Method:	Number of bags used:		
Administrative		County: Cass	Township: 26N Range: 1E		Topo map: Clymers
		Section: SE of the SE of the NW of Section 3			
		Grant Number:			
		Field located by: JA	on: Jun 14, 1979		
		Courthouse location by:	on:		
		Location accepted w/o verification by:	on:		
		Subdivision name:	Lot number:		
		Ft W of EL:	Ft N of SL:	Ft E of WL: 2400.0	Ft S of NL: 2300.0
		Ground elevation: 690.0	Depth to bedrock: 30.0	Bedrock elevation: 660.0	Aquifer elevation:
		UTM Easting: 550528.0	UTM Northing: 4508648.0		
Well Log		Top	Bottom	Formation	
		0.0	5.0	YEL CLAY	
		5.0	17.0	SAND	
		17.0	21.0	GREEN CLAY	
		21.0	30.0	GREY CLAY	
		30.0	65.0	LS	
Comments		OWNER VERIFICATION			

Record of Water Well

Indiana Department of Natural Resources

Reference Number	Driving directions to well		Date completed
116621	1 MILE WEST OF HOSPITAL ON BLACK TOP ROAD. KNOWN AS THE PORTER FARM - LOGANSPO?T?		Jun 01, 1964

Owner-Contractor	Name	Address	Telephone
Owner	PORTER FARM	LOGANSPO?T IND	
Driller	ELWOOD NORRIS	2316 MONROE ST ANDERSON IND	
Operator	ELWOOD NORRIS	License: null	

Construction Details	Use: OTHER	Drilling method:	Pump type:
Well	Depth: 152.0	Pump setting depth:	Water quality:
Casing	Length: 19.0	Material:	Diameter: 28.0
Screen	Length:	Material:	Diameter: Slot size:

Well Capacity Test	Type of test:	Test rate: 41.7 gpm for 4.0 hrs.	BailTest rate: 16.7 gpm for 1.0 hrs.
	Drawdown: 2.0 ft.	Static water level: 6.0 ft.	Bailer Drawdown: 0.0 ft.

Grouting Information	Material:	Depth: from to
	Installation Method:	Number of bags used:

Well Abandonment	Sealing material:	Depth: from to
	Installation Method:	Number of bags used:

Administrative	County: Cass	Township: 26N Range: 1E	Topo map: Clymers
	Section: SW of the NW of the NE of Section 4		
	Grant Number:		
	Field located by: JES	on: Jun 18, 1969	
	Courthouse location by:	on:	
	Location accepted w/o verification by:	on:	
	Subdivision name:	Lot number:	
	Ft W of EL: 2400.0	Ft N of SL:	Ft E of WL: Ft S of NL: 1300.0
	Ground elevation: 679.0	Depth to bedrock: 18.0	Bedrock elevation: 661.0 Aquifer elevation:
	UTM Easting: 549016.0		UTM Northing: 4508982.0

Well Log	Top	Bottom	Formation
	0.0	10.0	BLANK
	10.0	18.0	DIRT & BLUE CLAY
	18.0	30.0	WH LIME HARD
	30.0	50.0	BLUE LIME HARD
	50.0	95.0	BR LIME MED HARD
	95.0	120.0	GRAY LIME
	120.0	132.0	BLUE LIME WATER ROCK
	132.0	140.0	BLACK SLATE
	140.0	152.0	BR LIME

Comments

Record of Water Well

Indiana Department of Natural Resources

Reference Number 103749	Driving directions to well S RIVER RD 125S AT 225W N SIDE		Date completed Oct 01, 1975	
Owner-Contractor Owner Driller	Name USGS USGS	Address	Telephone	
Construction Details	Use:	Drilling method:	Pump type:	
Well	Depth:	Pump setting depth:	Water quality:	
Casing	Length:	Material:	Diameter:	
Screen	Length:	Material:	Diameter: Slot size:	
Well Capacity Test	Type of test:	Test rate: gpm for hrs.	BailTest rate: gpm for hrs.	
	Drawdown: ft.	Static water level: ft.	Bailer Drawdown: ft.	
Grouting Information	Material:	Depth: from to		
	Installation Method:	Number of bags used:		
Well Abandonment	Sealing material:	Depth: from to		
	Installation Method:	Number of bags used:		
Administrative	County: Cass		Township: 27N Range: 1E	
	Section: SW of the NE of the NE of Section 33		Topo map: Clymers	
	Grant Number:			
	Field located by: USGS		on: May 18, 1976	
	Courthouse location by:		on:	
	Location accepted w/o verification by:		on:	
	Subdivision name:		Lot number:	
	Ft W of EL: 900.0	Ft N of SL: 4000.0	Ft E of WL:	Ft S of NL:
	Ground elevation: 590.0	Depth to bedrock: 20.0	Bedrock elevation: 570.0	Aquifer elevation:
	UTM Easting: 549582.0		UTM Northing: 4510618.0	
Well Log	Top	Bottom	Formation	
	0.0	2.0	TOPSOIL	
	2.0	11.0	SAND	
	11.0	15.0	GRAV	
	15.0	20.0	SAND	
	20.0	0.0	BEDROCK	
Comments	MC LOGANSPORT 52 DRY HOLE			

Record of Water Well

Indiana Department of Natural Resources

Reference Number 103754	Driving directions to well NW COR 225W 150S		Date completed Oct 15, 1975	
Owner-Contractor Owner Driller	Name USGS USGS	Address	Telephone	
Construction Details				
Well	Use:	Drilling method: Other	Pump type:	
	Depth:	Pump setting depth:	Water quality:	
Casing	Length:	Material:	Diameter:	
Screen	Length:	Material:	Diameter: Slot size:	
Well Capacity Test	Type of test:	Test rate: gpm for hrs.	Bail Test rate: gpm for hrs.	
	Drawdown: ft.	Static water level: ft.	Bailer Drawdown: ft.	
Grouting Information	Material:		Depth: from to	
	Installation Method:		Number of bags used:	
Well Abandonment	Sealing material:		Depth: from to	
	Installation Method:		Number of bags used:	
Administrative	County: Cass		Township: 27N Range: 1E	
	Section: SE of the SW of the NE of Section 33		Topo map: Clymers	
	Grant Number:			
	Field located by: USGS		on: May 18, 1976	
	Courthouse location by:		on:	
	Location accepted w/o verification by:		on:	
	Subdivision name:		Lot number:	
	Ft W of EL: 1700.0	Ft N of SL: 2650.0	Ft E of WL:	Ft S of NL:
	Ground elevation: 590.0	Depth to bedrock: 14.0	Bedrock elevation: 576.0	Aquifer elevation:
	UTM Easting: 549321.0		UTM Northing: 4510231.0	
Well Log	Top	Bottom	Formation	
	0.0	14.0	SOFT SANDY CLAY	
	14.0	0.0	BEDROCK	
Comments	MC LOGANSPOUT 51 DRY HOLE			

Record of Water Well

Indiana Department of Natural Resources

Reference Number 103744	Driving directions to well NE COR 275W 200S		Date completed Sep 30, 1975	
Owner-Contractor Owner Driller	Name USGS USGS	Address	Telephone	
Construction Details				
Well	Use:	Drilling method:	Pump type:	
	Depth:	Pump setting depth:	Water quality:	
Casing	Length:	Material:	Diameter:	
Screen	Length:	Material:	Diameter: Slot size:	
Well Capacity Test	Type of test:	Test rate: gpm for hrs.	Bail Test rate: gpm for hrs.	
	Drawdown: ft.	Static water level: ft.	Bailer Drawdown: ft.	
Grouting Information	Material:	Depth: from to		
	Installation Method:	Number of bags used:		
Well Abandonment	Sealing material:	Depth: from to		
	Installation Method:	Number of bags used:		
Administrative	County: Cass		Township: 27N Range: 1E	
	Section: SE of the SE of the SW of Section 33		Topo map: Clymers	
	Grant Number:			
	Field located by: USGS		on: May 18, 1976	
	Courthouse location by:		on:	
	Location accepted w/o verification by:		on:	
	Subdivision name:		Lot number:	
	Ft W of EL:	Ft N of SL: 10.0	Ft E of WL: 2000.0	Ft S of NL:
	Ground elevation: 649.0	Depth to bedrock: 12.0	Bedrock elevation: 637.0	Aquifer elevation:
	UTM Easting: 548827.0		UTM Northing: 4509419.0	
Well Log	Top	Bottom	Formation	
	0.0	5.0	MOVED BACK 2' TOPSOIL CLY GRV	
	5.0	6.0	LRG GRAV	
	6.0	9.0	CLAY SM GRAV	
	9.0	10.0	SAN DW/ CLAY	
	10.0	10.5	LRG BOULDER	
	10.5	12.0	CLAY SM GRAV	
	12.0	0.0	BEDROCK	
Comments	MC LOGANSPOUT 50 DRY HOLE TOPSOIL CLAY GRAV VRY LRG BOULDER 0 9			

Record of Water Well

Indiana Department of Natural Resources

Reference Number 103809	Driving directions to well NW COR 200S PENN CENTRAL RR 175W		Date completed Sep 30, 1975	
Owner-Contractor Owner Driller	Name USGS USGS	Address	Telephone	
Construction Details				
Well	Use:	Drilling method: Other	Pump type:	
	Depth:	Pump setting depth:	Water quality:	
Casing	Length:	Material:	Diameter:	
Screen	Length:	Material:	Diameter: Slot size:	
Well Capacity Test	Type of test:	Test rate: gpm for hrs.	BailTest rate: gpm for hrs.	
	Drawdown: ft.	Static water level: 4.0 ft.	Bailer Drawdown ft.	
Grouting Information	Material:		Depth: from to	
	Installation Method:		Number of bags used:	
Well Abandonment	Sealing material:		Depth: from to	
	Installation Method:		Number of bags used:	
Administrative	County: Cass		Township: 27N Range: 1E	
	Section: SW of the SE of the SW of Section 34		Topo map: Clymers	
	Grant Number:			
	Field located by: USGS		on: May 18, 1976	
	Courthouse location by:		on:	
	Location accepted w/o verification by:		on:	
	Subdivision name:		Lot number:	
	Ft W of EL:	Ft N of SL: 10.0	Ft E of WL: 1400.0	Ft S of NL:
	Ground elevation: 655.0	Depth to bedrock: 9.0	Bedrock elevation: 646.0	Aquifer elevation:
	UTM Easting: 550314.0		UTM Northing: 4509436.0	
Well Log	Top	Bottom	Formation	
	0.0	7.0	TOPSOIL SANDY CLAY W/ GRAV	
	7.0	9.0	GRAV	
	9.0	0.0	IMPENDERABLE GRAV DR LS	
Comments	MC LOGANSPOUT 49			

Record of Water Well

Indiana Department of Natural Resources

Reference Number 116560	Driving directions to well ON SR 25 JUST W. OF STATE HOSPITAL ON N. SIDE		Date completed Feb 06, 1969	
Owner-Contractor Name	Address	Telephone		
Owner	GOTWAL TRUCKING	LOGANSPOET, INDIANA		
Driller	J.B. ORTMAN & SONS	717 S. Malfalfa Road, Kokomo, Indiana		
Operator	JOHN W., CARL C., RICHARD R.	License: null		
Construction Details				
Well	Use: INDUSTRIAL	Drilling method: Rotary	Pump type:	
	Depth: 97.0	Pump setting depth:	Water quality:	
Casing	Length: 35.0	Material:	Diameter: 5.0	
Screen	Length:	Material:	Diameter: Slot size:	
Well Capacity Test	Type of test:	Test rate: 70.0 gpm for hrs.	BailTest rate: gpm for hrs.	
	Drawdown: ft.	Static water level: 15.0 ft.	Bailer Drawdown: ft.	
Grouting Information	Material:	Depth: from to		
	Installation Method:	Number of bags used:		
Well Abandonment	Sealing material:	Depth: from to		
	Installation Method:	Number of bags used:		
Administrative	County: Cass	Township: 26N Range: 1E		
	Section: SE of the NE of the NW of Section 3	Topo map: Clymers		
	Grant Number:			
	Field located by: DW	on: Sep 07, 1976		
	Courthouse location by:	on:		
	Location accepted w/o verification by:	on:		
	Subdivision name:	Lot number:		
	Ft W of EL:	Ft N of SL:	Ft E of WL: 2600.0	Ft S of NL: 1200.0
	Ground elevation: 662.0	Depth to bedrock: 13.0	Bedrock elevation: 649.0	Aquifer elevation:
	UTM Easting: 550551.0	UTM Northing: 4509040.0		
Well Log	Top	Bottom	Formation	
	0.0	8.0	BR CLAY	
	8.0	13.0	GRAV & BROKEN LS	
	13.0	63.0	GRAY LS	
	63.0	68.0	BR LS	
	68.0	97.0	GRAY LS	
Comments	OWNER VERIFIED;MC;WELL LOCATED 5 FT NE ADN 30 FT NW OF S CORNER OF BLDG.			

Record of Water Well

Indiana Department of Natural Resources

Reference Number 116661	Driving directions to well 80 FT W OF MAIN DRIVEWAY 27 FT S OF 2ND FLOOR DRIVE CAMP		Date completed Apr 10, 1964	
Owner-Contractor Owner Driller Operator	Name LOUISVILLE CEMENT CO LAYNE NORTHERN CO SCHOON	Address License: null	Telephone	
Construction Details Well	Use: Depth: 194.0	Drilling method: Cable Tool Pump setting depth:	Pump type: Water quality:	
Casing	Length:	Material:	Diameter: 12.0	
Screen	Length:	Material:	Diameter: Slot size:	
Well Capacity Test	Type of test: Drawdown: ft.	Test rate: gpm for hrs. Static water level: 11.0 ft.	Bail Test rate: 600.0 gpm for 8.0 hrs. Bailer Drawdown ft.	
Grouting Information	Material: Installation Method:	Depth: from to Number of bags used:		
Well Abandonment	Sealing material: Installation Method:	Depth: from to Number of bags used:		
Administrative	County: Cass Section: NW of the NE of the NE of Section 5 Grant Number: Field located by: UC Courthouse location by: Location accepted w/o verification by: Subdivision name: Ft W of EL: 750.0 Ground elevation: 665.0 UTM Easting: 547894.0		Township: 26N Range: 1E Topo map: Clymers on: Aug 01, 1964 on: on: Lot number: Ft E of WL: Bedrock elevation: 660.0 UTM Northing: 4509185.0	
	Ft N of SL: Depth to bedrock: 5.0		Ft S of NL: 400.0 Aquifer elevation:	
Well Log	Top	Bottom	Formation	
	0.0	6.0	YEL CLAY W/ S & G	
	6.0	194.0	LS	
Comments	LOUISVILLE CEMENT WELL #3 WELL REACHED 600 GPM FOR 8 HOURS WITH 2 OTHER WELL OPERATING			

Record of Water Well

Indiana Department of Natural Resources

Reference Number 116591	Driving directions to well 200 FT E OF CO RD & 990 FT N OF SOUTH PROPERTY LINE		Date completed Oct 12, 1967	
Owner-Contractor Owner Driller Operator	Name WILSON & COMPANY LAYNE NORTHERN CO D KENT	Address License: null	Telephone	
Construction Details	Use:	Drilling method: Cable Tool	Pump type:	
Well	Depth: 200.0	Pump setting depth:	Water quality:	
Casing	Length: 22.75	Material:	Diameter: 12.0	
Screen	Length:	Material:	Diameter: Slot size:	
Well Capacity Test	Type of test:	Test rate: 128.0 gpm for 8.0 hrs.	Bail Test rate: gpm for hrs.	
	Drawdown: 67.0 ft.	Static water level: ft.	Bailer Drawdown: ft.	
Grouting Information	Material:	Depth: from to		
	Installation Method:	Number of bags used:		
Well Abandonment	Sealing material:	Depth: from to		
	Installation Method:	Number of bags used:		
Administrative	County: Cass		Township: 26N Range: 1E	
	Section: SE of the NE of the NE of Section 3		Topo map: Clymers	
	Grant Number:			
	Field located by: WD	on: Sep 07, 1976		
	Courthouse location by:	on:		
	Location accepted w/o verification by:	on:		
	Subdivision name:	Lot number:		
	Ft W of EL: 450.0	Ft N of SL:	Ft E of WL:	Ft S of NL: 1275.0
	Ground elevation: 655.0	Depth to bedrock: 20.0	Bedrock elevation: 635.0	Aquifer elevation:
	UTM Easting: 551278.0	UTM Northing: 4509010.0		
Well Log	Top	Bottom	Formation	
	0.0	5.0	CLAY	
	5.0	20.0	SAND W/HEAVY GRAV	
	20.0	105.0	LS HARD	
	105.0	125.0	LS MED	
	125.0	200.0	LS SOFT	
Comments	WILSON & CO WELL #1; MC; WELL IS 400-450 E OF HOME ON W SIDE OF RD CREVACES BETWEEN 39 & 43, 75-95 & 185			

Record of Water Well

Indiana Department of Natural Resources

Reference Number	Driving directions to well		Date completed	
116606	110W 220S ON N. SIDE WELL LOC.: 15 FT E. & 10 FT. S. OF SE CORNER OF BLDG.		Nov 04, 1976	

Owner-Contractor	Name	Address	Telephone
Owner	GANGLOFF & DOWNHAM	429 FIRST, LOGANSPOUT, INDIANA	
Driller	ORTMAN DRILLING, INC.	717 S. MALFALFA ROAD, KOKOMO, INDIANA	
Operator	RICK O., FRANK G.	License: null	

Construction Details	Use: INDUSTRIAL	Drilling method: Rotary	Pump type:
Well	Depth: 202.0	Pump setting depth:	Water quality:
Casing	Length: 45.0	Material:	Diameter: 5.2
Screen	Length:	Material:	Diameter: Slot size:

Well Capacity Test	Type of test:	Test rate: 20.0 gpm for hrs.	Bail Test rate: gpm for hrs.
	Drawdown: ft.	Static water level: 12.0 ft.	Bailer Drawdown: ft.

Grouting Information	Material:	Depth: from to
	Installation Method:	Number of bags used:

Well Abandonment	Sealing material:	Depth: from to
	Installation Method:	Number of bags used:

Administrative	County: Cass	Township: 26N Range: 1E	Topo map: Clymers
	Section: NE of the NE of the NE of Section 3		
	Grant Number:		
	Field located by: JH	on: Jun 12, 1979	
	Courthouse location by:	on:	
	Location accepted w/o verification by:	on:	
	Subdivision name:	Lot number:	
	Ft W of EL: 250.0	Ft N of SL:	Ft E of WL: Ft S of NL: 650.0
	Ground elevation: 650.0	Depth to bedrock: 35.0	Bedrock elevation: 615.0 Aquifer elevation:
	UTM Easting: 551331.0		UTM Northing: 4509300.0

Well Log	Top	Bottom	Formation
	0.0	8.0	DIRT, S&G
	8.0	24.0	MED TO CRS S&G
	24.0	35.0	BLUE CLAY
	35.0	48.0	LT. BR STONE
	48.0	53.0	DR. BR STONE
	53.0	202.0	MED. BR & LT. GRAY STONE

Comments	VERIFIED BY EMPLOYEE;MC;1 HR. SURGING FROM 10 GPM TO 20 GPM
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Record of Water Well

Indiana Department of Natural Resources

Reference Number	Driving directions to well		Date completed	
116485	SOUTH OF WILSON PACKING PLANT ON BYPASS LOGANSPO RT INDIANA.		Feb 20, 1970	

Owner-Contractor Name	Address	Telephone
Owner STANDARD OIL CO.	LOGANSPO RT, INDIANA	
Driller EARL ARMSTRONG WELL DRILLING	P.O. BOX 345 BURLINGTON, INDIANA	
Operator EARL ARMSTRONG	License: null	

Construction Details	Use: HOME	Drilling method: Rotary	Pump type:
Well	Depth: 150.0	Pump setting depth:	Water quality:
Casing	Length: 44.0	Material:	Diameter: 5.0
Screen	Length:	Material:	Diameter: Slot size:

Well Capacity Test	Type of test:	Test rate: 35.0 gpm for 3.0 hrs.	BailTest rate: 35.0 gpm for 3.0 hrs.
	Drawdown: ft.	Static water level: 9.0 ft.	Bailer Drawdown ft.

Grouting Information	Material:	Depth: from to
	Installation Method:	Number of bags used:

Well Abandonment	Sealing material:	Depth: from to
	Installation Method:	Number of bags used:

Administrative	County: Cass	Township: 26N Range: 1E	Topo map: Clymers
	Section: SW of the SW of the NW of Section 2		
	Grant Number:		
	Field located by: WG	on: Sep 07, 1976	
	Courthouse location by:	on:	
	Location accepted w/o verification by:	on:	
	Subdivision name:	Lot number:	
	Ft W of EL:	Ft N of SL:	Ft E of WL: 400.0 Ft S of NL: 2450.0
	Ground elevation: 663.0	Depth to bedrock: 44.0	Bedrock elevation: 619.0 Aquifer elevation:
	UTM Easting: 551518.0		UTM Northing: 4508652.0

Well Log	Top	Bottom	Formation
	0.0	15.0	YEL CLAY
	15.0	38.0	GRAV & ROCKS
	38.0	44.0	STONE HOLE FOR PIPE
	44.0	150.0	LS

Comments	OPERATOR VERIFIED;MC;WELL 50 FT SOUTH OF LARGE WHT STORAGE TANK
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Record of Water Well

Indiana Department of Natural Resources

Reference Number 116490	Driving directions to well AT DEAD-END OF W. CLINTON ST. EAST OF BY PASS U.S. 35.	Date completed Oct 01, 1975															
Owner-Contractor Owner Driller	Name U.S.G.S. U.S.G.S.	Address Telephone															
Construction Details	Use: Depth: 13.4 Length: Length: 3.0	Drilling method: Other Pump setting depth: Material: Material:															
Well Casing Screen		Pump type: Water quality: Diameter: 1.5 Diameter: 1.25 Slot size: #70 GAUZE															
Well Capacity Test	Type of test: Drawdown: ft.	Test rate: gpm for hrs. Static water level: 7.5 ft. Bail Test rate: gpm for hrs. Bailer Drawdown: ft.															
Grouting Information	Material: Installation Method:	Depth: from to Number of bags used:															
Well Abandonment	Sealing material: Installation Method:	Depth: from to Number of bags used:															
Administrative	County: Cass Section: NW of the NW of the NW of Section 2 Grant Number: Field located by: U.S.G.S. Courthouse location by: Location accepted w/o verification by: Subdivision name: Ft W of EL: Ground elevation: 645.0 UTM Easting: 551585.0	Township: 26N Range: 1E Topo map: Clymers on: May 18, 1976 on: on: Lot number: Ft E of WL: 600.0 Bedrock elevation: 635.0 UTM Northing: 4509387.0 Ft S of NL: 10.0 Aquifer elevation:															
Well Log	<table border="0"> <thead> <tr> <th>Top</th> <th>Bottom</th> <th>Formation</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>3.0</td> <td>FILL</td> </tr> <tr> <td>3.0</td> <td>5.0</td> <td>S&G</td> </tr> <tr> <td>5.0</td> <td>10.0</td> <td>SILT</td> </tr> <tr> <td>10.0</td> <td>10.0</td> <td>BEDROCK</td> </tr> </tbody> </table>	Top	Bottom	Formation	0.0	3.0	FILL	3.0	5.0	S&G	5.0	10.0	SILT	10.0	10.0	BEDROCK	
Top	Bottom	Formation															
0.0	3.0	FILL															
3.0	5.0	S&G															
5.0	10.0	SILT															
10.0	10.0	BEDROCK															
Comments	MC																

Record of Water Well

Indiana Department of Natural Resources

Reference Number 104441	Driving directions to well 200' E OF CR & 990' N OF PROPERTY LINE		Date completed Oct 12, 1967	
Owner-Contractor Owner Driller Operator	Name WILSON & CO. LAYNE - NORTHERN CO. DICK KENT	Address LOGANSPOUT, IN MISHAWAKA, IN License: null	Telephone	
Construction Details Well	Use: INDUSTRIAL Depth: 200.0	Drilling method: Cable Tool Pump setting depth:	Pump type: Water quality:	
Casing	Length: 22.75	Material:	Diameter: 12.0	
Screen	Length:	Material:	Diameter: Slot size:	
Well Capacity Test	Type of test: Drawdown: 67.0 ft.	Test rate: 128.0 gpm for 8.0 hrs. Static water level: 2.0 ft.	Bail Test rate: gpm for hrs. Bailer Drawdown: ft.	
Grouting Information	Material: Installation Method:	Depth: from to Number of bags used:		
Well Abandonment	Sealing material: Installation Method:	Depth: from to Number of bags used:		
Administrative	County: Cass Section: SE of the SW of the SW of Section 35 Grant Number: Field located by: WG Courthouse location by: Location accepted w/o verification by: Subdivision name: Ft W of EL: Ground elevation: 643.0 UTM Easting: 551836.0		Township: 27N Range: 1E Topo map: Clymers on: Jul 09, 1976 on: on: Lot number: Ft E of WL: 850.0 Bedrock elevation: 639.0 UTM Northing: 4509470.0	
	Ft N of SL: 100.0 Depth to bedrock: 4.0	Ft S of NL: Aquifer elevation:		
Well Log	Top	Bottom	Formation	
	0.0	5.0	CLAY	
	5.0	20.0	SAND & HEAVY GRAV	
	20.0	105.0	LIMESTONE HARD	
	105.0	125.0	LIMESTONE MED	
	125.0	200.0	LIMESTONE SOFT	
Comments	MC WELL #1 VERIFIED BY EMPLOYEE CREVICES BETWEEN 39-43 75-95 AND 185 WELL ABOUT 100' N OF CLINTON AND 150' W OF 35			

Record of Water Well

Indiana Department of Natural Resources

Reference Number 116554	Driving directions to well CLINTON ST, SW OF LOGANSPOET, YELLOW S/ STONE		Date completed Apr 16, 1956	
Owner-Contractor Owner Driller	Name CARNEY JOHNSON	Address	Telephone	
Construction Details	Use:	Drilling method:	Pump type:	
Well	Depth: 50.0	Pump setting depth:	Water quality:	
Casing	Length: 11.0	Material:	Diameter: 4.0	
Screen	Length:	Material:	Diameter: Slot size:	
Well Capacity Test	Type of test:	Test rate: gpm for hrs.	Bail Test rate: gpm for hrs.	
	Drawdown: ft.	Static water level: 12.0 ft.	Bailer Drawdown: ft.	
Grouting Information	Material:	Depth: from to		
	Installation Method:	Number of bags used:		
Well Abandonment	Sealing material:	Depth: from to		
	Installation Method:	Number of bags used:		
Administrative	County: Cass		Township: 26N Range: 1E	
	Section: NW of the NE of the NW of Section 2		Topo map: Clymers	
	Grant Number:			
	Field located by: HERRING		on: Aug 01, 1964	
	Courthouse location by:		on:	
	Location accepted w/o verification by:		on:	
	Subdivision name:		Lot number:	
	Ft W of EL:	Ft N of SL:	Ft E of WL: 1600.0	Ft S of NL: 100.0
	Ground elevation: 640.0	Depth to bedrock: 10.0	Bedrock elevation: 630.0	Aquifer elevation:
	UTM Easting: 551900.0		UTM Northing: 4509390.0	
Well Log	Top	Bottom	Formation	
Comments	DEPTH OF WELL: 50-60' MC 630			

Record of Water Well

Indiana Department of Natural Resources

Reference Number 103830	Driving directions to well COR OF CLINTON AND W STS LGSPT		Date completed Sep 11, 1973	
Owner-Contractor	Name	Address	Telephone	
Owner	ABC METAL			
Driller	ORTMAN DRLG INC	717 S MALFALFA RD KOKOMO		
Operator	RICK/CHRIS/MIKE O/NED O/JOHN	License: null		
Company	STEINBERGER CONST	1333 SMITH LGSPT		
Construction Details				
Well	Use: INDUSTRIAL	Drilling method: Rotary	Pump type:	
	Depth: 182.0	Pump setting depth:	Water quality:	
Casing	Length: 31.0	Material:	Diameter: 5.6	
Screen	Length:	Material:	Diameter: Slot size:	
Well Capacity Test				
	Type of test:	Test rate: 20.0 gpm for hrs.	Bail Test rate: gpm for hrs.	
	Drawdown: ft.	Static water level: 32.0 ft.	Bailer Drawdown: ft.	
Grouting Information				
	Material:	Depth: from to		
	Installation Method:	Number of bags used:		
Well Abandonment				
	Sealing material:	Depth: from to		
	Installation Method:	Number of bags used:		
Administrative				
	County: Cass	Township: 27N Range: 1E		Topo map: Clymers
	Section: SE of the SE of the SW of Section 35			
	Grant Number:			
	Field located by: WG	on: Sep 09, 1976		
	Courthouse location by:	on:		
	Location accepted w/o verification by:	on:		
	Subdivision name:	Lot number:		
	Ft W of EL:	Ft N of SL: 150.0	Ft E of WL: 2400.0	Ft S of NL:
	Ground elevation: 641.0	Depth to bedrock: 6.0	Bedrock elevation: 635.0	Aquifer elevation:
	UTM Easting: 552314.0		UTM Northing: 4509491.0	
Well Log				
	Top	Bottom	Formation	
	0.0	6.0	DIRT & ROCKS	
	6.0	12.0	DK BR STONE	
	12.0	18.0	DK GRAY STONE	
	18.0	30.0	DK BR STONE	
	30.0	55.0	GRAY LS	
	55.0	72.0	DK BR STONE	
	72.0	84.0	GRAY STONE	
	84.0	105.0	BR STONE	
	105.0	130.0	BL GRAY STONE	
	130.0	165.0	GRAY STONE	
	165.0	172.0	BR STONE	
	172.0	176.0	DK BR STONE	
	176.0	182.0	LT BR STONE	
Comments				
	VER BY EMPLOYEE WELL 1' S ON SW COR OF BLDG			

Record of Water Well

Indiana Department of Natural Resources

Reference Number 116455	Driving directions to well			Date completed
Owner-Contractor Owner Driller	Name PATER HOME D. HENDERSON	Address 6/25/56 ROYAL CENTER	Telephone	
Construction Details Well Casing Screen	Use: Depth: 50.0 Length: 8.0 Length:	Drilling method: Cable Tool Pump setting depth: Material: Material:	Pump type: Water quality: Diameter: 4.0 Diameter: Slot size:	
Well Capacity Test	Type of test: Drawdown: ft.	Test rate: 16.7 gpm for hrs. Static water level: 12.0 ft.	BailTest rate: gpm for hrs. Bailer Drawdown: ft.	
Grouting Information	Material: Installation Method:	Depth: from to Number of bags used:		
Well Abandonment	Sealing material: Installation Method:	Depth: from to Number of bags used:		
Administrative	County: Cass Section: NW of the NW of the NE of Section 2 Grant Number: Field located by: HC HERRING Courthouse location by: Location accepted w/o verification by: Subdivision name: Ft W of EL: Ground elevation: 640.0 UTM Easting: 552276.0		Township: 26N Range: 1E Topo map: Clymers on: Aug 01, 1964 on: on: Lot number: Ft E of WL: 2850.0 Bedrock elevation: 635.0 UTM Northing: 4509381.0 Ft S of NL: 100.0 Aquifer elevation:	
Well Log	Top	Bottom	Formation	
	0.0	6.0	CLAY	
	6.0	50.0	STONE - LIME	
Comments	MASTER KOST 3/59			

Record of Water Well

Indiana Department of Natural Resources

Reference Number	Driving directions to well		Date completed	
116586	SR 35 BY PASS - ACROSS FROM WILSON-SINCLAIR CO. ON W. SIDE 100W 20SS WELL LOC: 38 FT. W. AND 7 FT. N. OF NE CORNER OF BUILDING		Mar 15, 1973	
Owner-Contractor Name	Address	Telephone		
Owner	SOUTHERN MICHIGAN STORAGE	LOGANSPOUT, INDIANA		
Driller	ORTMAN DRILLING, INC.	717 S. Malfalfa Road, Kokomo, Indiana		
Operator	JOHN W, MIKE O, FRANK V, NED O	License: null		
Company	TRI-CITIES CONSTR. CO., INC.	925 W. SAVIDGE ST., SPRING LAKE, MICH.		
Construction Details				
Well	Use: INDUSTRIAL	Drilling method: Rotary	Pump type:	
	Depth: 202.0	Pump setting depth:	Water quality:	
Casing	Length: 43.0	Material:	Diameter: 5.56	
Screen	Length:	Material:	Diameter: Slot size:	
Well Capacity Test	Type of test:	Test rate: 60.0 gpm for hrs.	Bail Test rate: gpm for hrs.	
	Drawdown: ft.	Static water level: ft.	Bailer Drawdown: ft.	
Grouting Information	Material:	Depth: from to		
	Installation Method:	Number of bags used:		
Well Abandonment	Sealing material:	Depth: from to		
	Installation Method:	Number of bags used:		
Administrative	County: Cass		Township: 26N Range: 1E	
	Section: SW of the NE of the NE of Section 3		Topo map: Clymers	
	Grant Number:			
	Field located by: WG		on: Jul 07, 1976	
	Courthouse location by:		on:	
	Location accepted w/o verification by:		on:	
	Subdivision name:		Lot number:	
	Ft W of EL: 1000.0	Ft N of SL:	Ft E of WL:	Ft S of NL: 800.0
	Ground elevation: 655.0	Depth to bedrock: 17.0	Bedrock elevation: 638.0	Aquifer elevation:
	UTM Easting: 551106.0		UTM Northing: 4509133.0	
Well Log	Top	Bottom	Formation	
	0.0	17.0	S&G	
	17.0	107.0	GRAY LS	
	107.0	111.0	LIGHT BR LS	
	111.0	129.0	GRAY LS	
	129.0	131.0	BR LS	
	131.0	202.0	GRAY LS	
Comments	MANAGER VERIFIED; WELL LOCATED 20 FT EAST AND 5 FT NORTH OF ENTRANCE TO MAIN OFFICE; MC			

Record of Water Well

Indiana Department of Natural Resources

Reference Number	Driving directions to well	Date completed	
116566	175W 225S ON WEST SIDE	Oct 15, 1969	

Owner-Contractor Name	Address	Telephone
Owner ROBERT WALKER	214 9TH ST. LOGANSPOUT, INDIANA	
Driller J.B. ORTMAN & SONS	717 S. MALFALFA ROAD, KOKOMO, INDIANA	
Operator JOHN W., NED O., RICHARD R.	License: null	

Construction Details	Use: HOME	Drilling method: Rotary	Pump type:
Well	Depth: 112.0	Pump setting depth:	Water quality:
Casing	Length: 83.0	Material:	Diameter: 5.0
Screen	Length:	Material:	Diameter: Slot size:

Well Capacity Test	Type of test:	Test rate: 60.0 gpm for hrs.	BailTest rate: gpm for hrs.
	Drawdown: ft.	Static water level: 37.0 ft.	Bailer Drawdown ft.

Grouting Information	Material:	Depth: from to
	Installation Method:	Number of bags used:

Well Abandonment	Sealing material:	Depth: from to
	Installation Method:	Number of bags used:

Administrative	County: Cass	Township: 26N Range: 1E	Topo map: Clymers
	Section: NW of the NE of the SW of Section 3		
	Grant Number:		
	Field located by: WD	on: Sep 07, 1976	
	Courthouse location by:	on:	
	Location accepted w/o verification by:	on:	
	Subdivision name:	Lot number:	
	Ft W of EL:	Ft N of SL: 2350.0	Ft E of WL: 1500.0
	Ground elevation: 710.0	Depth to bedrock: 37.0	Bedrock elevation: 671.0
	UTM Easting: 550224.0		UTM Northing: 4508484.0
			Ft S of NL:
			Aquifer elevation:

Well Log	Top	Bottom	Formation
	0.0	13.0	BR CLAY
	13.0	16.0	S&G
	16.0	21.0	BR CLAY
	21.0	39.0	BLUE CLAY
	39.0	61.0	GRAY LS
	61.0	62.0	BLUE CLAY, S&G, BROKEN LS
	62.0	77.0	GRAY LS
	77.0	79.0	BLUE CLAY, S&G, BROKEN LS
	79.0	112.0	GRAY LS

Comments	OWNER VERIFIED;MC;60 FT EAST AND 25 FT SOUTH OF SE CORNER OF HOME
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Appendix G

ATSDR ToxFAQ - Tetrachloroethylene

This fact sheet answers the most frequently asked health questions (FAQs) about tetrachloroethylene. For more information, call the ATSDR Information Center at 1-888-422-8737. This fact sheet is one in a series of summaries about hazardous substances and their health effects. It's important you understand this information because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Tetrachloroethylene is a manufactured chemical used for dry cleaning and metal degreasing. Exposure to very high concentrations of tetrachloroethylene can cause dizziness, headaches, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death. Tetrachloroethylene has been found in at least 771 of the 1,430 National Priorities List sites identified by the Environmental Protection Agency (EPA).

What is tetrachloroethylene?

(Pronounced tět'ră-klôr' ô-ěth'ă-lēn')

Tetrachloroethylene is a manufactured chemical that is widely used for dry cleaning of fabrics and for metal-degreasing. It is also used to make other chemicals and is used in some consumer products.

Other names for tetrachloroethylene include perchloroethylene, PCE, and tetrachloroethene. It is a nonflammable liquid at room temperature. It evaporates easily into the air and has a sharp, sweet odor. Most people can smell tetrachloroethylene when it is present in the air at a level of 1 part tetrachloroethylene per million parts of air (1 ppm) or more, although some can smell it at even lower levels.

What happens to tetrachloroethylene when it enters the environment?

- ☐ Much of the tetrachloroethylene that gets into water or soil evaporates into the air.
- ☐ Microorganisms can break down some of the tetrachloroethylene in soil or underground water.
- ☐ In the air, it is broken down by sunlight into other chemicals or brought back to the soil and water by rain.
- ☐ It does not appear to collect in fish or other animals that live in water.

How might I be exposed to tetrachloroethylene?

- ☐ When you bring clothes from the dry cleaners, they will release small amounts of tetrachloroethylene into the air.
- ☐ When you drink water containing tetrachloroethylene, you are exposed to it.

How can tetrachloroethylene affect my health?

High concentrations of tetrachloroethylene (particularly in closed, poorly ventilated areas) can cause dizziness, headache, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death.

Irritation may result from repeated or extended skin contact with it. These symptoms occur almost entirely in work (or hobby) environments when people have been accidentally exposed to high concentrations or have intentionally used tetrachloroethylene to get a "high."

In industry, most workers are exposed to levels lower than those causing obvious nervous system effects. The health effects of breathing in air or drinking water with low levels of tetrachloroethylene are not known.

Results from some studies suggest that women who work in dry cleaning industries where exposures to tetrachloroethyl-

ToxFAQs Internet home page via WWW is <http://www.atsdr.cdc.gov/toxfaq.html>

ene can be quite high may have more menstrual problems and spontaneous abortions than women who are not exposed. However, it is not known if tetrachloroethylene was responsible for these problems because other possible causes were not considered.

Results of animal studies, conducted with amounts much higher than those that most people are exposed to, show that tetrachloroethylene can cause liver and kidney damage. Exposure to very high levels of tetrachloroethylene can be toxic to the unborn pups of pregnant rats and mice. Changes in behavior were observed in the offspring of rats that breathed high levels of the chemical while they were pregnant.

How likely is tetrachloroethylene to cause cancer?

The Department of Health and Human Services (DHHS) has determined that tetrachloroethylene may reasonably be anticipated to be a carcinogen. Tetrachloroethylene has been shown to cause liver tumors in mice and kidney tumors in male rats.

Is there a medical test to show whether I've been exposed to tetrachloroethylene?

One way of testing for tetrachloroethylene exposure is to measure the amount of the chemical in the breath, much the same way breath-alcohol measurements are used to determine the amount of alcohol in the blood.

Because it is stored in the body's fat and slowly released into the bloodstream, tetrachloroethylene can be detected in the breath for weeks following a heavy exposure.

Tetrachloroethylene and trichloroacetic acid (TCA), a breakdown product of tetrachloroethylene, can be detected in the blood. These tests are relatively simple to perform. These tests aren't available at most doctors' offices, but can be per-

formed at special laboratories that have the right equipment.

Because exposure to other chemicals can produce the same breakdown products in the urine and blood, the tests for breakdown products cannot determine if you have been exposed to tetrachloroethylene or the other chemicals.

Has the federal government made recommendations to protect human health?

The EPA maximum contaminant level for the amount of tetrachloroethylene that can be in drinking water is 0.005 milligrams tetrachloroethylene per liter of water (0.005 mg/L).

The Occupational Safety and Health Administration (OSHA) has set a limit of 100 ppm for an 8-hour workday over a 40-hour workweek.

The National Institute for Occupational Safety and Health (NIOSH) recommends that tetrachloroethylene be handled as a potential carcinogen and recommends that levels in workplace air should be as low as possible.

Glossary

Carcinogen: A substance with the ability to cause cancer.

CAS: Chemical Abstracts Service.

Milligram (mg): One thousandth of a gram.

Nonflammable: Will not burn.

References

This ToxFAQs information is taken from the 1997 Toxicological Profile for Tetrachloroethylene (update) produced by the Agency for Toxic Substances and Disease Registry, Public Health Service, U.S. Department of Health and Human Services, Public Health Service in Atlanta, GA.

Where can I get more information? For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop F-32, Atlanta, GA 30333. Phone: 1-888-422-8737, FAX: 770-488-4178. ToxFAQs Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaq.html> ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.



Appendix H

Indiana Department of Natural Resources – Sensitive Environment Information

CHESTERSON, DANIEL

From: Hellmich, Ron
Sent: Thursday, March 13, 2008 9:01 AM
To: CHESTERSON, DANIEL
Subject: RE: IDEM Site Investigation Sensitive Environments Map (Logansport)
Attachments: r092_idem_logansport.pdf

ATTN: Dan Chesterson
IDEM/OLQ Site Investigation Section
100 N. Senate Avenue
PO Box 6015
Indianapolis, IN 46206-6015

Mr. Chesterson:

I am responding to your request for information on the endangered, threatened, or rare (ETR) species, high quality natural communities, and natural areas documented from a project area, Logansport Wellfield, Logansport, Indiana. The Indiana Natural Heritage Data Center has been checked and attached you will find information on the ETR species documented within one mile of the project area.

The bald eagle is a nest record. While this nest record is actually about 1.25 mile northwest of the wellfield area, it is close enough to bring to your attention.

For more information on the animal species mentioned, please contact Katie Smith, Nongame Supervisor, Division of Fish and Wildlife, 402 W. Washington Room W273, Indianapolis, Indiana 46204, (317)232-4080.

The information I am providing does not preclude the requirement for further consultation with the U.S. Fish and Wildlife Service as required under Section 7 of the Endangered Species Act of 1973. You should contact the Service at their Bloomington, Indiana office.

U.S. Fish and Wildlife Service
620 South Walker St.
Bloomington, Indiana 47403-2121
(812)334-4261

At some point, you may need to contact the Department of Natural Resources' Environmental Review Coordinator so that other divisions within the department have the opportunity to review your proposal. For more information, please contact:

Robert Carter, Jr., Director
Department of Natural Resources
attn: Christie Stanifer
Environmental Coordinator
Division of Water
402 W. Washington Street
Indianapolis, IN 46204

3/13/2008

Please note that the Indiana Natural Heritage Data Center relies on the observations of many individuals for our data. In most cases, the information is not the result of comprehensive field surveys conducted at particular sites. Therefore, our statement that there are no documented significant natural features at a site should not be interpreted to mean that the site does not support special plants or animals.

Due to the dynamic nature and sensitivity of the data, this information should not be used for any project other than that for which it was originally intended. It may be necessary for you to request updated material from us in order to base your planning decisions on the most current information.

Thank you for contacting the Indiana Natural Heritage Data Center. You may reach me at (317)232-8059 if you have any questions or need additional information.

Ronald Hellmich
Division of Nature Preserves
402 W. Washington St., Rm W267
Indianapolis, IN 46204
(317)232-8059
(317)233-0133 fax
rhellmich@dnr.IN.gov

From: CHESTERSON, DANIEL
Sent: Tuesday, March 11, 2008 1:57 PM
To: Hellmich, Ron
Subject: IDEM Site Investigation Sensitive Environments Map (Logansport)

Hi Ron – I have attached an information request and a map of a site located in Logansport, Indiana. Could you do a quick check of the immediate area and let me know if there are any concerns from your office?
Thanks!

Dan Chesterson
IDEM/OLQ Site Investigation Program
(317)234-3505

3/13/2008

3/13/2008

Endangered, Threatened and Rare Species, and High Quality Natural Communities Near the
Logansport Wellfield Project Area, Logansport, Indiana

TYPE	SPECIES NAME	COMMON NAME	FED	STATE	TRS	LASTOBS	COMMENTS
Bird	Haliaeetus leucocephalus	Bald Eagle	LT,PDL	SE	027N001E 29 EH	2007-05-18	
r ish	Etheostoma tippecanoe	Tippecanoe Darter		SSC	027N001E 33	2000-08-23	
Vascular Plant	Schizachne purpurascens	Purple Oat		SE	027N001E 33 NWQ NEQ	1985-06-25	

Fed: LE = listed federal endangered; C = federal candidate species

State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SG = state significant; WL
= watch list; no rank = not ranked but tracked to monitor status

Appendix I

August 2008 Drilling Logs and Field Notes

#1

Drilling Method	Geoprobe
-----------------	----------

Date/Time Started 830 8/12/2008
Date/Time Completed _____

Depth	% Recovery	Field Screening	Graphic	Written Description
0	80			0-0.5: Black/brown topsoil 0.5-1: Dark brown medium hard (silty?) clay 1-2: Hard brown clay, tr. silt 2-2.8: Hard brown clay, softens with depth 2.8-3.8: Soft tan silty clay with gravel or crushed rock, limy dust Sample taken from 3 feet bgs Lg rock in shoe
5				Fall-in? dark brown clay 5-5.5: Sandy clay, trace gravel 5.5-6: Brown silty sand with large blue stone 6-7: Gravelly clay with white-coated peds, large piece of crushed rock at top Olive-blue/tan/brown mottling Refusal at 7 ft bgs

#2 / P-1

Drilling Method

Geoprobe

Date/Time Started

1130 8/11/2008

Date/Time Completed

1500 8/11/2008

west side of recreation fields, by treeline

Depth	% Recovery	Field Screening	Graphic	Written Description
0	90		5 ft stickup	0-3: Dark brown friable organic silt with some clay, trace gravel
			1 in MW	3-4: As above, becomes very stiff
			screened	4-4.5: Grades to med. brown clay with some silt
			15 to 25 ft	
5	30			5-7: As above, stiff.
				Limestone cobble encountered at 7 feet; tan sand below cobble.
10	40			10-15: Light tan medium sand with silt and some gravel.
				Cobble at ~13 ft
15	40			15-18: As above.
				18-19: Dark brown clay with gravel to cobble.
				19-20: Grades to light brown fine sand with trace gravel
20	80			20-24: Grades to medium brown sand with clay and some fine to coarse gravel.
				24-25: Saturated medium brown fine to coarse sand with gravel
				and some silt and clay
				Groundwater sample from ~30 ft (?)
				Soil sample 24-25 ft

Boring Number

#3

Logged By P. Giesting

Drilling Method

GeoprobePhysical Setting ~10 yards northwest
of water tower, Logansport State Hospital

Date/Time Started

910 8/12/2008

Date/Time Completed

1000

Depth	% Recovery	Field Screening	Graphic	Written Description
0	55			0-1: Black topsoil, trace gravel
				1-1.3: Soft brown clay with gravel (crushed rock)
				1.3-1.5: Crumbly old asphalt
				Wet at 1.5 ft
				1.5-2.6: Wet plastic mottled brown clay
				Soft and silty 2.1 to 2.3 ft
5	80			5-7.5: As above
				7.5-8.1: More silt and sand, wetter
				8.1-8.5: As above, hard
				8.5-9: Wet brown silty sandy gravel
10	100			10-10.6: Very wet brown sandy gravelly silt
				10.6-15: Red-brown very hard silty clay, trace gravel
				Red/black/green mottles
15	40			Ample wet gravelly fall-in
				15-17: As above, trace sand
				Crumpled liner, stopped hole at 17 ft
				Groundwater sample at 8-11 ft
				Soil sample at 15.5 ft

#4

Drilling Method Geoprobe

Date/Time Completed _____

[illegible]

Boring Number

#5

Logged By P. Giesting

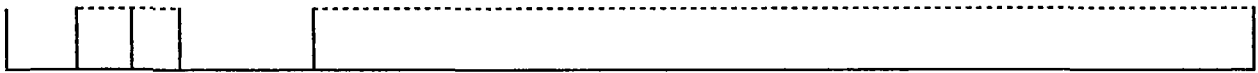
Drilling Method Geoprobe

Physical Setting _____

Date/Time Started _____

Date/Time Completed _____

Depth	% Recovery	Field Screening	Graphic	Written Description
				Drilled 5 ft, hit rock, bent shoe, moved over
				Drilled 5 ft, hit rock, bent another shoe, moved over 15-20 feet
0 (Attempt 2)				0-1: Dark brown organic topsoil
	85			1-4.25: Brown hard clay with gravel
				Sand and increasing gravel below 3 ft
0 (Attempt 3)				0-1: Topsoil
	70			1-2: Grades to hard brown clay
				2-3: Grades to hard brown mottled (red-brown/tan/gray) clay with gravel
				3-3.5: Clayey brown and green-brown sand and gravel (as large as 1.5 in)
5	70			5-6.5: Tan gravelly sandy silt and clay with white and gray mottling
				6.5: 1 in pinkish tannish white sand seam
				6.5-8.5: Hard brown silty sand and gravel with white and gray mottles
10	60			10-12.2: As above, gravelly at bottom, wet at 12 ft
				12.2-13: Brown gravelly sandy silt and clay
15	90			15-19.25: Brown muddy rounded gravel
				Increased mud below 16.75
				Lightens in color at 18 ft
				Tannish mottles at and below 18.5 ft
				Soil sample 17 ft
				19.25-19.5: Blackish-olive sand and tan mud
				Groundwater sample from 14 to 17.5 feet



#6

Drilling Method

Geoprobe

Date/Time Started

900 8/13/2008

Date/Time Completed

Depth	% Recovery	Field Screening	Graphic	Written Description
0 <				

#7

Drilling Method	Geoprobe
-----------------	----------

Date/Time Started 1100 8/13/2008
Date/Time Completed _____

Depth	% Recovery	Field Screening	Graphic	Written Description
0 <				

#8

Drilling Method	Geoprobe
-----------------	----------

Date/Time Started 945 8/13/2008
Date/Time Completed _____

Depth	% Recovery	Field Screening	Graphic	Written Description
0	100			0-1: Hard dark topsoil
				1-4: Hard brown silty clay, abundant gray-green mottling
				4-5: Softer brown silty clay with trace gravel and coarse sand, less mottling
5	60			5-5.3: As above, harder
				5.3-8: Brown clayey silty gravel
				Tan at 6.5 to 6.7, sewage smell
				Rock in shoe
10	75			10-10.5: Sandy gravelly wet brown clay
				10.5-13: Brown muddy sandy gravel, wet and loose 10.5-11
				wet and compacted 11-13
				Purple and blue streaks at 12.5 ft
				Soil sample 11-11.5 ft
				13-13.75: Hard gray clayey silt, trace gravel
				Groundwater sample 9.5 to 13 ft
				Jim Dillman Health & Safety contact
				Spill Prevention Plan has boring logs/geological data

#9 (background)

Drilling Method	Geoprobe
-----------------	----------

Date/Time Started 1455 8/13/2008
Date/Time Completed _____

[illegible]

#10

Drilling Method Geoprobe

Date/Time Started 1400 8/13/2008
Date/Time Completed _____

[illegible]

Boring Number

P-2

Logged By P. Giesting

Drilling Method Geoprobe

Physical Setting ~ 50 yd east of #2/P-1

Date/Time Started 1315 8/11/2008

Date/Time Completed 1615 8/11/2008

Depth	% Recovery	Field Screening	Graphic	Written Description
0			3 in stickup	As #2/P-1
5	50		Screened	5-5.3: Brown clay with gravel
			17 to 27 ft	5.3-5.7: As above, with sand
				5.7-5.8: Brown clay
				5.8-6.3: Grades to medium brown fine sand, some gravel
				6.3-7.3: As above, increased clay, brown/dark brown/tan/olive/beige mottles
				Grades to sandy clay
10	30			10-11.5: Heavy mottling continues
				Gravelly sandy clay to clayey sand, large pebbles
				Some broken white chert(?) at bottom
15	80			15-15.5: As above
				15.5-16: Grades to brown medium sand
				16-17.5: Tan medium sand
				17.5: 1 in of white broken rock with gray striations
				17.5-19: Tan medium sand with increasing gravel
20	80			20-20.3: Tan medium sand
				20.3-20.7: Brown medium sand
				20.7-21: Brown clay with gravel
				21-24: Tan gravelly sand to sand and gravel, sand fines with depth
				Water at 23.5
25				As above to BOH, 27 feet
				No soil sample

P-3 failed

Drilling Method

Geoprobe

Date/Time Started

1625 8/11/2008

Date/Time Started

[illegible]

attempt 2

Boring Number

P-3 final

Logged By P. Giesting

Drilling Method

Geoprobe

Physical Setting

Att. 4: 40 yd south of P-1/2

Date/Time Started

1525 8/12/2008

Date/Time Completed

Depth	% Recovery	Field Screening	Graphic	Written Description
0	100		Screened	0-5: Hard brown clay, lightens with depth, softens at 3 ft, more at 4.3 ft
			17 to 27 ft	Trace tan/green mottles
5	60			5-5.5: As above
				5.5: 2 in dark brown sand
				5.5-6: As above, with gravel or cinders
				6-7.75: Brown sand and clayey silt with gravel
				changing to gravel/crushed rock
				7.75-8: Dark brown sand and gravel
10	70			Fall-in clay
				10-13.5: As above; broken metal lighting at 11 ft, broken green shale at 12 ft
				Pink at 13.25 ft
15	60			15-18: As above, to sandy silty gravel
				More clay 15.5 to 15.75
				17.25: 2 in brown sand
20	80			20-24: As above, sandy silty gravel
				Tan/whiter below 21 ft, also harder
				Black streak at 23.2 ft
				Large rock 23.75-23.9 ft
25	65			25-25.75: Wet gravel with tan sandy mud
				25.75-26.25: More silt and clay, cohesive
				26.25-28.25: Tan muddy gravel, more mud less water than above
				Sandy at 27 ft

attempt 4

[illegible]

Called Logansport State Hospital - left message for Herb Dietrich, explained that IDem would like to locate soil borings on LSH grounds

Herb Detrick returned my call. Jeff Babb was on conference call with Mr. Detrick. I explained Alex's proposed investigation, and Mr. Detrick + Mr. Babb indicated that they would be glad to assist in any way. We discussed the placement of up to 3 borings on LSH property. I told them I would e-mail a map of proposed sample locations to them on Monday (7/21). They agreed to look at it and let me know if there were any concerns re: placement of borings.

Don Chester

7/21/2008

Met with Krista Gremos + Jason Murdoch (IDEM biologist and chemist) to discuss Logansport workplan. Neither had any major concerns.

7/21/2008

emailed map of proposed sample locations to Herb Detrick. Mr. Detrick responded that one boring was on property no longer owned by LSH. I propose to move the boring (Boring 1) south nearer the former landfill so that it will be on LSH property.

7/24/2008

Met with Steve McIntire, Mark Jaworski + Kevin Herron to discuss sampling plan and logistics. Agreed to push sampling date back one week (to week of 8/11/2008).

Dan Chisholm

7/25/2008

Spoke to Jim Jackson, Logansport Water Operator. Updated him on our change of plans/new start date. He gave me the phone #'s for the county health dept. (Rob McLaughlin 574-753-7762) and the county engineer (Steve Easley 574-753-6766). Mr. Jackson also told me that he would update the mayor of Logansport of our activities.

7/25/2008

called Rob McLaughlin of Cass Co. Health Dept. Explained to him our plans. I will fax a copy of our fact sheet to him when completed.

7/25/2008

call Steve Easley - left message for him explaining our project and asked if there were any requirements of us to drill in the area.

in county road right-of-way,
other than call for utility
marking.

7/28/08

received response from Steve
Eastley, OK to drill, no special
requirements unless drilling
on the road. Asked for a
map of drilling locations in
case they receive calls from
residents.

8/1/08 Steve M + DC went to
Logansport to locate sample
points. Met w/ Jeff Babler at
hospital to discuss LSH sample
locations. Stopped @ Timmerman
Palmit - no one available.
Stopped at ABC Metals - spoke
to Daniel Kendall, President, and
Jerry Martin - OK to sample
on their property. Stopped
by water dept. Jim
Jackson met there.

in. Blank

Spoke to Jim Dillman,
Timmerman Palmit - thought
would be OK to sample.
Asked that I call back after
had conf. with managers.

Called Jim Dillman - OK to
sample on property.

8/11/08

- Arrived on site 9:25 am. Kevin H.
was waiting. Steve M arrived
shortly after 1000. Jeff Babler
met us on site at Boring 2 to
discuss placement of borings.

- Drilled Boring #2 - took subsurface
soil sample at $\approx 24'$. Took GW
sample at 30' - set perimometer.
Set 2 more perimeters in general
area, 1st at 21', 2nd at refusal
at 4 ft (S. of 1st 2, near rise in elevation).
Next attempt was approx 5' North
of 1st.

of previous bedrock encountered at approx 7'. Moved to the North near small gravel road (Thomas Rd?). Hand augered 6-7' to determine clearance. Clear but Geoprobe hit refusal at $\approx 10'$. Stopped for day.

8/12/08 Met at Boring 1 North of compost area - hit bedrock at 7'. Took a soil sample (low screening detection - 0.4-0.5) - no water encountered.

8/12/08 Boring #3 placed just North of water tower at direction of LSH staff. drilled to $\approx 17'$. Took 2 soil samples, one at 7', with pid reading of 0.1-0.2. Took 2nd sample at 17', no pid reading - took water sample 8.11"

8/12/08 Boring #5 along CR 2005, west of LSH entrance - Refusal at 4-7', 3rd location reached low - took soil sample at 17'

Dan Christ

8/12/08 Boring 4 North of State Hwy Range soil sample taken at 3 1/4 ft.

8/13/08 Doug E. filled in for DC for P.M. for 1st 2 locations - ABC Metals soil only, no water. Transducer - Placed soil & water. DC arrived during drilling of 4th location. Next boring was at #5 at Tyson, 1/2 N of County Rd 100.

8/13 2 Backloggers boring placed in afternoon (#9 & #10). Soil only, from #10.

10/6/08 - called Janina Jordan - discussed sample results with her.

~~Dan Christ~~

Appendix J

2008 Indiana Fish Consumption Advisory

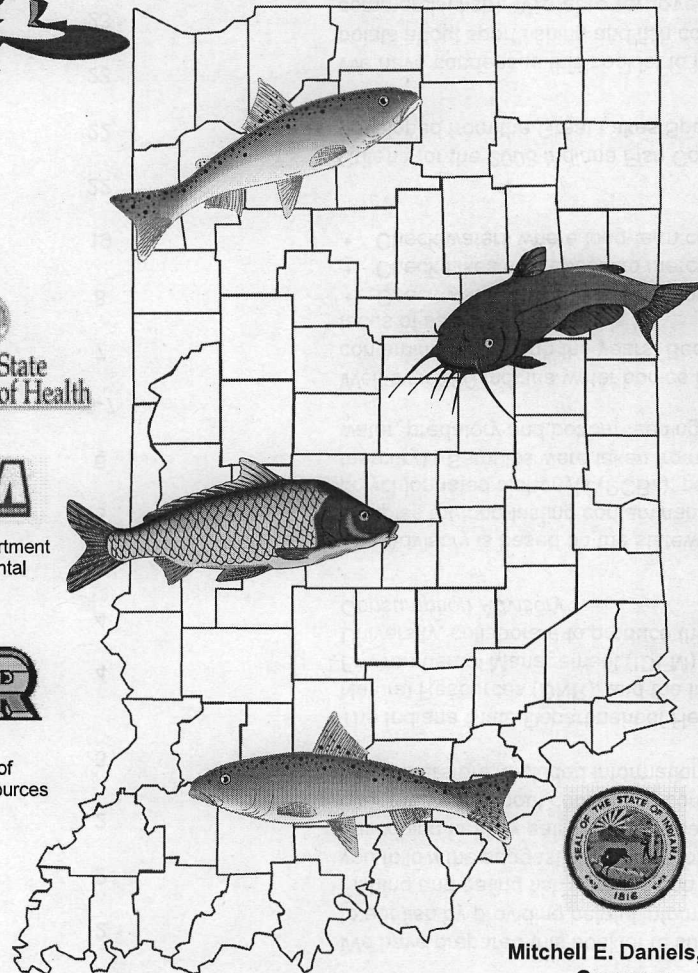
2008 INDIANA FISH CONSUMPTION ADVISORY



Indiana Department
of Environmental
Management



Indiana
Department of
Natural Resources



Mitchell E. Daniels, Jr.
Governor

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2008 Indiana Fish Consumption Advisory

Background

We have prepared this booklet to support fishermen and those who like to eat fish by providing helpful information to make healthy choices. Fishing and eating fish from Indiana waterways can be safe and fun if you follow the suggestions on the following pages. In addition to describing healthy eating of sport-caught fish, interest has increased over the years about consuming commercial and farm-raised fish. We have, therefore, included information in the Advisory.

The Indiana State Department of Health (ISDH), Indiana Department of Natural Resources (DNR), and the Indiana Department of Environmental Management (IDEM), with support from Purdue University, collaborate to produce this annual *Indiana Fish Consumption Advisory*.

The Advisory is based on the statewide collection and analysis of fish samples for long-lasting contaminants found in fish tissue, such as polychlorinated biphenyls (PCBs), pesticides, and/or heavy metals (e.g., mercury). Samples were taken from fish that feed at all depths of the water, predatory and bottom-feeding.

Well over 200 Indiana water bodies have been tested for fish contaminants through the years. Because testing is expensive, the focus of samples generally is to:

- ♦ Check water with known or suspected pollution sources
- ♦ Check lakes susceptible to mercury contamination
- ♦ Check waters where long-term contaminant trends are tracked

Criteria for the *2008 Indiana Fish Consumption Advisory* were developed from the Great Lakes Sport Fish Advisory Task Force.

We have condensed this booklet to include only the most important points about sport fishing and fish consumption (including sport and commercial fish). We also removed most Group 2 fish from the tables, since the Guidelines on page 2 of the Advisory state "that a person should assume any fish you catch is a Group 2..." if it is not specifically listed.

Using the Advisory

It may not be legal to catch and keep all sizes of fish that we have included in this Advisory.

Please refer to the DNR's Indiana Fishing Guide for information about the legal size limits and number of fish that can be caught based upon the species of fish. Turn to page 24 in this Advisory to find out how to obtain a copy of the Indiana Fishing Guide, or log on to DNR's Web site at: www.IN.gov/dnr/fishwild/3699.htm

Carefully read the instructions below, since meal advice depends upon the species and size of fish.

1. Measure the fish from the tip of the nose to the end of the tail fin.
2. Find the table that includes your fishing site. Look for the symbol showing the type of contaminant and the size of the fish that you caught. If there is no listing for the size of fish, keep in mind that larger fish are likely to be as contaminated, or more, than any that were tested. If you do not find the species of fish in the Advisory, then assume that the fish is in a Group 2 advisory.
3. While fish may have been tested for more than one contaminant, the symbol indicates the contaminant of greatest concern.

Guidelines to Reduce Your Risks

Follow this guidance:

☞ **Use the groupings** in the Advisory to determine the number of fish meals you can eat in a week or month.

☞ Assume that any fish you catch is a Group 2 if it is not listed or the site where you are fishing is not listed in the Advisory.

☞ **Eat smaller, less fatty fish** like pan fish (bluegill, perch, and crappie).

☞ **Remove fat near the skin of the fish prior to cooking and broil, bake, or grill fish** so the fat drips away.

☞ **Eat at least 2 servings (3-4 ounces/serving) of fish per week**(see page 5 for more information).

Risk Comparisons Risk of Death		
Estimated Advisory Group	Level of Risk (chances out of 1,000)	Activity
Level 5	35-125	Smoking 1-2 packs of cigarettes per day
	7-30	Having 200 chest x-rays per year
	5-30	Eating one 10-oz. meal per week of Group 5 fish
Level 4	17	Driving a motor vehicle
	11-12	Eating one 8-oz meal per week of mixed Great Lakes salmonids at 1984 contaminant levels
	3-6	Eating one 8-oz meal per week of mixed Great Lakes salmonids at 1987 contaminant levels
Level 3	0.1-6	Breathing air in the U.S. urban areas at early 1980's contaminant levels
	3.5	Recreational boating
	1-2	Drinking one 12-oz. beer per day
Level 2	1.5	Recreational hunting
	0.014	Complications from an insect bite or sting

Health Risks & Benefits from Eating Sport & Commercial Fish

General Health Risk

Your risk of getting cancer from eating contaminated fish cannot be predicted with certainty. Currently, cancer affects about 1 out of every 4 people by the age of 70, primarily due to smoking, diet, and hereditary risk factors. Exposure to contaminants in fish you eat may not increase your cancer risk at all. If you follow this Advisory over your lifetime, you should be able to lower your exposure, thus reducing your cancer risk from contaminants in fish.

Fish provide a diet high in protein and low in saturated fats when properly prepared. Many doctors suggest that eating one-half pound (8 ounces/ uncooked) of fish each week is helpful in preventing heart disease. Almost all fish may provide health benefits, since fish often replaces a high-fat food in the diet.

Since fish species differ in diet, habitat, growth rate, and physiology, they build up contaminants in their bodies at different rates. Long-term effects of human exposure to PCBs and pesticides have not been fully determined by health experts. People who regularly eat sport fish, including women of childbearing age and children, are particularly susceptible to contaminants that build up in the body over time. Because contaminants may produce harmful effects when consumed over a period of time, the Indiana State Department of Health (ISDH) advises that intake of these fish be limited. (See page 5.)

Contaminants in Fish

Polychlorinated biphenyls (PCBs), pesticides, and mercury collect in the soil, water, sediment, and in microscopic animals. They build up in greater amounts in larger, older fish and in predatory fish (fish that eat other fish). Contaminants are not usually found in smaller panfish such as bluegill and crappie.

Once in a lake, mercury is changed into methylmercury by bacteria and other processes. Fish absorb methylmercury from their food and it is tightly bound to the fish's muscles. There is no method of cooking or cleaning fish that will reduce the mercury.

PCBs and pesticides tend to be stored in the fat of fish, especially fatty fish such as carp and catfish. Unlike mercury, cleaning and cooking a fish to remove fat will lower the amount of PCBs in a fish meal. Most of the fat is located near the skin of the fish.

Eating a boneless, skinless fillet, with the fat layer along the belly flap and the midpoint of the back removed, will limit the amount of fat consumed.

PCBs and methylmercury build up in your body over time. It may take months or years of regularly eating contaminated fish to accumulate levels that are a health concern. If you follow this Advisory, the amount of methylmercury you take into your body is safely eliminated over time. Larger amounts of methylmercury may harm your nervous system. An unborn child is especially at risk of mercury poisoning.

Men typically face fewer health risks following exposure to contaminants. However, animal studies have also shown that mercury can damage sperm, which could result in fertility problems.

The Advisory advice for PCBs is intended to protect children from developmental problems. PCBs also cause changes in human blood and in the liver and immune function of adults. The meal advice for PCB-contaminated fish is based on the developmental delays that have been measured in infants. It is difficult to say what other effects PCBs may have on anglers and their families, but PCBs cause cancer in laboratory animals and may cause cancer in humans.

Purchased Fish

People often ask about the levels of contaminants in fish bought in stores or restaurants. The U.S. Food and Drug Administration (FDA) sets tolerance levels for contaminants to regulate the interstate sale of fish. Recently, the FDA and the U.S. Environmental Protection Agency (EPA) issued fish consumption advice for women (of childbearing age) and children about commonly eaten commercial fish species. The FDA/EPA advice recommends that up to 12 ounces of fish that are low in mercury be eaten per week to gain the health benefits from fish and shellfish.

Please see the FDA/EPA Consumer Advice for more information and to determine which commercial fish species are safest. Their Web site is: <http://www.cfsan.fda.gov/admehq3.html>

A fact sheet which gives detailed advice about consuming fish that is targeted at women and children can be seen at: <http://fn.cfs.purdue.edu/fish4health/>

Because fish bought in a store or restaurant do not come with labels that tell you the contaminant levels or even where the fish came from, it is up to the consumer to ask about the source of the fish. In addition to checking the FDA/EPA advice, it is important to eat a variety of fish species to make certain that you benefit the most from fish.

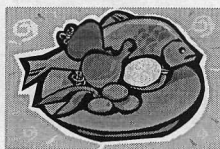
The *Commercial Fish Consumption Table* (page 5) separates two types of canned tuna into different categories by the amount a person can eat. "Light" tuna is made from young fish, while "white" tuna like albacore comes from older fish that have higher levels of mercury. When choosing canned tuna, "light" tuna is lowest in mercury but is also lower in the "healthy" fats found in fish.

Fish sticks from the grocery, fast-food sandwiches, or restaurant-prepared fish most often come from pollock, which is low in mercury.

Recent studies have discussed the levels of contaminants in farm-raised salmon versus wild salmon. Wild salmon have been shown to have very low levels of contaminants. While farm-raised salmon are said to have "significantly" higher levels than wild salmon, these levels of contaminants are still NOT high enough to be of serious concern. Farm-raised salmon are actually slightly higher in "helpful" omega-3 fatty acids than wild salmon.

There may be times when friends and family catch fish that you may want to eat. If there is no advice about how much you can eat, then assume it is a Group 2. (Refer to page 5 of this Advisory.) This means eating no more than 8 ounces (before cooking) in one week.

It is also likely that, at some point, you may eat more fish and shellfish in one week than you ordinarily would. There is little change in the level of methylmercury in that short period of time. Just lower the amount of fish that you eat over the next couple of weeks.



Advisory Groups

The chart on page 5 explains the fish groupings used throughout this Advisory to help in choosing the amount and type of fish that are safe to eat. Additionally, a list of fish species affected by "mercury" on a statewide basis has also been added to this chart.

For certain waters, more or less restrictive advice is needed, because fish have been found to contain higher or lower levels of mercury or PCBs. Please check the tables on pages 8-22.

Carp Advisory for all Indiana Rivers and Streams

Generally, carp are contaminated with PCBs. *Unless noted otherwise, carp in all Indiana rivers and streams fall under the following risk groups:*

Carp	15-20 inches	Group 3
Carp	20-25 inches	Group 4
Carp	over 25 inches	Group 5

Group 5 Waterways

All fish from the following waters are in the Group 5 advisory due to the high levels of contaminants.

DO NOT EAT ANY FISH CAUGHT IN THESE WATERS:

Clear Creek, Monroe County
Salt Creek, Downstream of Clear Creek in Monroe County and Lawrence County
Pleasant Run Creek, Lawrence County
Elliot Ditch, Tippecanoe County
Wea Creek, Tippecanoe County
Grand Calumet River/Indiana Harbor Canal, Lake County
Kokomo Creek, Howard County from U.S. 31 to Wildcat Creek
Wildcat Creek, Downstream of the Waterworks Dam in Kokomo through Howard and Carroll Counties
Little Mississinewa River, Randolph County
Little Sugar Creek/Walnut Fork, Montgomery County
Sugar Creek, Montgomery County (I-74 to SR-32)
Stony Creek, Hamilton County
Stouts Creek, Monroe County

Advisory Groups of the Indiana Fish Consumption Advisory	
Group 1	Unrestricted consumption. One meal per week for women who are pregnant or breast-feeding, women who plan to have children, and children under the age of 15.
Group 2	Limit to one meal per week (52 meals per year) for adult males and females. One meal per month for women who are pregnant or breast-feeding, women who plan to have children, and children under the age of 15.
Group 3	Limit to one meal per month (12 meals per year) for adult males and females. Women who are pregnant or breast-feeding, women who plan to have children, and children under the age of 15 <u>do not eat</u>.
Group 4	Limit to one meal every 2 months (6 meals per year) for adult males and females. Women who are pregnant or breast-feeding, women who plan to have children, and children under the age of 15 <u>do not eat</u>.
Group 5	No consumption (DO NOT EAT).

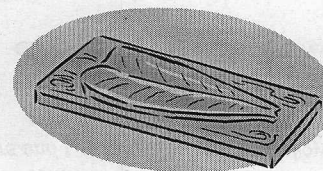
IMPORTANT NOTE: For more detailed information, especially for the at-risk population, please review the 2008 Safe Eating Guidelines for Selected Sport Fish from Most of Indiana's Inland Waters.

Commercial Fish Consumption*	
Fresh or canned salmon; shellfish like shrimp, crab, and oysters; tilapia; herring; canned "light" tuna; scallops; sardines; pollock; cod; and catfish	Unlimited for all adults One meal per week **
Canned albacore "white" tuna (6 oz.), tuna steak, halibut, and lobster	1 meal per week for adults One meal per month**
Shark, swordfish, tile fish, king mackerel	1 meal per month for adult males and females Do not eat**

*References:

1. USDHHS and US EPA - 2004 EPA & FDA: Advice for Women Who Might Become Pregnant
 2. Choose Wisely 2004, Wisconsin DNR
 3. An Expectant Mother's Guide to Eating Minnesota Fish, 2004
- **Consumption guidelines for the at-risk population: women of childbearing years, nursing mothers, and all children under the age of 15 years.

A meal is 8 ounces (before cooking) of fish for a 150-pound person, or 2 ounces of uncooked fish for a 40-pound child. Tip: Subtract or add 1 ounce of uncooked fish for every 20 pounds of body weight.



Health Benefits

A 2002 touchscreen survey* conducted for the ISDH showed that **nearly 44 percent of Indiana residents eat little, if any, fish, whether commercially purchased or recreationally caught.** For this reason, the most important message the ISDH wants to share is, "Include fish as a part of your regular diet." The key to gaining the most health benefits from fish is to eat a variety of fish that are low in contaminants. (See pages 3 and 5.) Unlike women of childbearing age and young children, most men and postmenopausal women can eat moderate amounts of fish without being harmed by contaminants. Fish provide a high-protein, low-fat food, which is low in saturated fats. Many researchers suggest, and nutritionists recommend, that consuming 6 ounces of fish a week is beneficial in preventing heart disease.

It is important for people to continue eating fish, including salmon, whether or not it is farm-raised or wild, but at levels that are recommended by the ISDH to maximize benefits and minimize risks.

The health benefits gained from eating either farm-raised or sport-caught fish may far outweigh the risks associated with the low levels of contaminants found in these fish or the choice of eating no fish.

Fish of almost any species, lean or fat, may have substantial health benefits when they replace a high-fat food in the diet. Nutritionists recommend eating at least 2 servings (2-3 ounces/serving) per week. **Three ounces of cooked fish is about the size of a deck of cards.**

The information on the Grouping table for Indiana sport fish and the commercial Fish Consumption table (page 5) helps to provide safe and healthy choices.

*Indiana State Department of Health's *Fish Consumption Advisory Booklet Survey*, Survey of America, Aug-Sept. 2002

Commonly Asked Questions

What are PCBs?

PCBs are synthetic oils that were once widely used in electrical transformers and capacitors. PCBs break down very slowly in the environment.

What is mercury?

Mercury is a naturally occurring metal that does not break down but cycles between land, water, and air. Some mercury that reaches Indiana waters occurs naturally. Mercury is also released from coal-burning power plants and from burning household and industrial waste.

How can I tell if a fish is contaminated?

Although contaminated fish may not smell, taste, or look different, they can still pose an increased risk to anyone who eats them. This is especially true for pregnant mothers and their fetuses, babies, and children. The Fish Advisory informs you about which fish are contaminated.

What about pay-to-fish lakes?

Generally, fish caught in pay lakes are safe to eat. The ISDH recommends that consumption be limited to no more than one meal per week. (See page 5 to define a meal.)

Parasites and Tumors in Fish

Parasites

Anglers sometimes catch fish that contain worms, grubs, cysts, or lumps in the flesh. When cleaning fish, anglers may notice worms in or around the intestines of the fish or fungus growths on the skin, fins, or gills. These fish parasites are a normal part of the ecosystem in which the fish lives. While not nice to look at, the edible parts of the fish that have parasites can be eaten, provided they are thoroughly cooked.

Some of the most commonly seen parasites of fish are black spots, yellow grubs, and tapeworms. Most fish have parasites, and they seldom affect the well-being of the fish except under unusual conditions. **Parasites in fish are only a problem when fish are not thoroughly cooked or are eaten raw.**

Black Spot

Black spot is caused by a parasite called a fluke, which burrows into the skin of fish. The black pigment (about pinhead size) forms in the tissue surrounding the fluke and is a fish's reaction to the parasite. The fluke itself is actually a whitish color.

Yellow Grub

Yellow grubs are also caused by a fluke, which penetrates the skin of fish and curls up into a sac under the skin or in the muscle where it grows to be the grub. The grubs are often found in the flesh of fish near the dorsal fins. When freed from the sac, the grub may be up to ½-inch long.

Tapeworms

Young tapeworms are common in the organs and body cavity of many fish. They usually live in the internal organs of the fish. They resemble long, thin ribbons about 1/16-inch wide.

Tumors

Occasionally, anglers catch fish with external growths, tumors, sores, or other lesions. Such abnormalities generally result from viral or bacterial infections. Abnormalities in the liver or intestines are sometimes seen in fish such as white suckers and brown bullheads and can be caused by parasites or tumors. Concern about the potential effects of these diseases on the fish themselves, and the possible role of pollution in causing tumors in some coarse fish, has prompted ongoing investigations into these abnormalities. Growths on game fish caused by viruses include lymphocystis, dermal sarcoma, and lymphosarcoma.

Viruses infect fish skin through contact with infected fish during the spring spawning run, forming pale or white cauliflower-like growths. Lymphocystis does not kill affected fish, and tagging studies have shown that these fish can lose the growths by the following spring. There is no known health risk from consuming an infected fish once it has been skinned and cooked.

Dermal sarcoma, another viral disease affecting walleye, is caused by viruses that infect cells and cause growths just under the skin. These growths can be removed by skinning the fish.

The appearance of viral or bacterial infections in fish may be unattractive, but there is no evidence to suggest that these infections pose a threat to consumers.

Summary

Fish is a good source of protein, minerals, and vitamins and can be very healthy for you. As with many foods, you should eat certain fish in moderation. How fish is prepared, age, gender, and health are factors to consider when choosing fish. **Use the chart on page 5 as a guide if you eat recreationally caught fish.** Recommendations are also provided for store-bought/commercial (fresh, frozen, or canned fish) on page 5.

Some fish may absorb contaminants from the water where they live and from the food that they eat. The amount of these contaminants in the fish can increase over time. It is important to keep your exposure to these contaminants to a minimum by remembering four important facts:

- For sport-caught fish: larger, older, or fattier fish (e.g., catfish, carp, and bass) take in more contaminants such as PCBs.
- Mercury is bound to the meat and not to the fat of the fish.
- Cooking fish can reduce some contaminants, such as PCBs, but not mercury.
- Women of childbearing age, infants, and children are more at risk from consuming contaminated fish than men (see table on page 5).

Don't see your fish or site listed? Assume it is a Group 2 (general population: 1 meal/week; women/children: 1 meal/month).

Location	Species	Fish Size (inches)	Contaminant	Group	
Tanners Creek					
Dearborn County	Bluegill	Up to 6		1	
	Carp	19-21	□○	2	
		21+	□	3	
	Largemouth Bass	Up to 13		1	
		17+	□○	3	
Tippecanoe River					
Kosciusko County (Oswego to State Road 15)					
	Bluegill	Up to 5		1	
	Carp	Up to 23	□	2	
		23+	□	3	
	Longear Sunfish	Up to 5		1	
	Rock Bass	Up to 6		1	
	Warmouth	Up to 6		1	
	Kosciusko County (Downstream of State Road 15)	Bluegill	6+	□	3
Carp		20-27	□	3	
		27+	□	4	
Redhorse Species		16-18	□	3	
		18+	□	4	
Fulton County		Carp	Up to 24	□○	2
			24+	□	3
	Pulaski County	Carp	16-25	□○	2
25+			□	3	
Longear Sunfish		Up to 4		1	
Carroll County	Carp	21-22	□○	2	
		22+	□	3	
Trail Creek					
LaPorte County	Brown Trout	18+	□	3	
	Carp	Up to 23	□	4	
		23+	□	5	
	Rock Bass	10+	□	3	
	Smallmouth Bass	14-19	□	3	
		19+	□	4	
	Walleye	18-27	□	3	
		27+	□	4	
Travers Ditch					
Fulton County	Blacknose Dace	Up to 2		1	
Unnamed Tributary of Eel River					
Miami County	Creek Chub	Up to 3		1	

Location	Species	Fish Size (inches)	Contaminant	Group
Wabash River				
Adams/Wells Counties	Channel Catfish	21+	□	3
	Freshwater Drum	Up to 12		1
	Golden Redhorse	Up to 13		1
	White Crappie	Up to 9		1
Huntington/Wabash Counties	Blue Sucker	21-26	□	3
		26+	□	4
	Freshwater Drum	Up to 12		1
	White Bass	11-21	□○	3
		21+	□	4
Miami/Cass/Carroll/Tippecanoe (upstream of Lafayette) Counties	Black Redhorse	19+	□	3
	Blue Sucker	21-26	□	3
		26+	□	4
	Channel Catfish	15+	□	3
	Sauger	13+	□	3
	Shorthead Redhorse	15+	□	3
	Smallmouth Buffalo	Up to 20	□	3
		20+	□	4
	Bigmouth Buffalo	18+	□	3
	Blue Sucker	21-26	□	3
		26+	□	4
	Carp suckers	Up to 13	□	3
		13-19	□	4
		19+	□	5
Tippecanoe (downstream from Lafayette)/Fountain/Warren/Vermillion/Parke Counties	Channel Catfish	Up to 20	□	3
		20+	□	4
	Flathead Catfish	21+	□	3
	Paddlefish	34+	□	3
	Sauger	13+	□	3
	Smallmouth Buffalo	Up to 20	□	3
		20+	□	4
	Bigmouth Buffalo	21-24	□	3
		24+	□	4
	Blue Sucker	21-26	□	3
		26+	□	4
	Carp suckers	17+	□	3
	Channel Catfish	13-22	□	3
		22+	□	4
	Flathead Catfish	21+	□	3
Vigo/Sullivan/Knox Counties				

General Population ○ = Mercury □ = PCBs
 Group 1 = Unlimited meals Group 2 = 1 meal/week Group 3 = 1 meal/month
 Group 4 = 1 meal/2 months Group 5 = DO NOT EAT
 (For women and children, please refer to the Guidelines on page 5.)